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Ord River Irrigation Area Stage 2 (M2 Supply Channel)

Compliance Assessment Report - Statement 938

Prepared for
Department of Regional Development
by Strategen

May 2017

Ord River Irrigation Area Stage 2 (M2 Supply Channel)

Compliance Assessment Report - Statement 938

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May 2017

Limitations

Scope of services

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Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: Department of Regional Development

Report Version	Revision No.	Purpose	Strategen author / reviewer	Submitted to Client	
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1. Introduction

1.1 Project background

The WA Minister for State Development (the proponent) has approval to develop land for irrigated agriculture across the Weaber, Keep River and Knox Creek Plains, located north-northeast of Kununurra in the eastern Kimberley region of WA and extends to the Keep River estuary in the Northern Territory. The area of development (M2 Area) is immediately northeast of the existing Ord River Irrigation Area (ORIA), with proposed development representing the second stage of the ORIA scheme. It comprises approximately 76 000 ha (including Buffer Areas) and a key part of the development is main irrigation channel (the 'M2 channel'), that extends from Lake Kununurra alongside the M1 channel.

1.2 Project approvals

The proposal to develop the M2 Area for irrigated agriculture was considered by the WA and NT governments in 2002 (the 'M2 proposal'). An Environmental Review and Management Programme/Draft Environmental Impact Statement (ERMP/Draft EIS; Kinhill 2000) was submitted for the M2 proposal in 2000 and assessed under the *Environmental Protection Act 1986* (EP Act). The M2 proposal was granted approval to be implemented by the WA Minister for the Environment in February 2002 by the issue of Ministerial Statement (MS) 585. In January 2007, this approval was extended to February 2012. Subsequent to the issue of MS 585 a number of elements within the statement were modified and a new statement, MS 830, was issued on 7 May 2010 to replace MS 585.

The Department of State Development (DSD) submitted an application to amend conditions of MS 830 in June 2012 pursuant to s 46 of the EP Act. The proposed amendments to conditions were to bring ORIA Stage 2 in line with contemporary implementation conditions without reducing necessary environmental obligations under the original conditions and commitments. The s 46 application was approved and an amended statement (MS 938) was issued on 12 June 2013.

1.3 Proponent details

The WA Minister for State Development is the current proponent for the proposal after transferral to the State from the original co-proponents; being Wesfarmers Sugar Company Pty Ltd, Marubeni Corporation and the Water Corporation of Western Australia.

Up until the conclusion of the 2015 compliance assessment, LandCorp managed implementation of the Weaber Plain Development part of the M2 proposal on behalf of DSD and acted as the key contact for previous compliance audits. In 2016 the Department of Regional Development (DRD) was enlisted act on behalf of DSD as the audit client. Kimberley Agricultural Investment (KAI) continues to implement and manage farming operations at the Weaber Plain (now referred to as the Goomig area) and Knox Creek Plain, including the requirements of the environmental approvals on site, with formal proponenty intended to be transferred to KAI at some stage pending finalisation of relevant agreements with the State. At the time of report preparation this process was expected to be completed in 2017.

Refer to Section 2 for further detail on management responsibility of assets.

2. Current status

2.1 Status of construction and operation

2.1.1 Weaber Plain

During this audit period (1 January 2016–31 December 2016), Lot 13 was partially cleared. Clearing of all other lots was completed in the previous audit period, including Lots 15 and 16, owned by the Yawooroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation (MG Corporation). Cropping continued on Lots 17 and 18 and commenced on Lot 14, with a tailwater return system now in operation to service those three lots together. Construction of a tailwater return system for Lots 3 and 5 was completed during this audit period after commencing in the 2015 period, with cropping commencing on these lots in 2016. Commencement of construction of a tailwater system to service Lots 19, 20 and 21 also occurred in this audit period. The remaining lots are varying stage of development into irrigable areas. Shared infrastructure construction and repairs associated with the rectification of defective pipes were completed in previous audit periods.

As stated in Section 1.3, LandCorp is no longer be involved in the management of the Weaber Plain Development and ownership of some assets within the development has been transferred to other entities. Table 1 outlines the current ownership and management of assets within Weaber Plain. In 2016, KAI also took ownership of the nearby Carlton Hill Station pastoral lease, to the west and north of the M2 proposal area.

Table 1 Weaber Plain asset ownership and management

Asset	Owner	Management arrangement
Lots 12, 1, 2, 6, 8 9, 3, 5 14, 17, 18, 20, 21, 19	Owned by the State. To be leased by KAI.	KAI to manage.
Lot 13	Owned by the State. To be leased by KAI.	KAI unable to develop until an agreement with Sorby Hills mine is in place.
Lots 15, 16	To be owned by MG Corporation.	KAI developing on behalf of MG Corporation.
M2, M2S channels and structures	Owned by Water Corporation (assets transferred to the Water Corporation in June 2015).	In the process of being finalised.
M2N, M2S1 channels, flood protection levees, drains, associated structures (e.g. M2S1W7; DW1GS)	Owned by Department of Regional Development (DRD) (assets handed over to DRD in 2014).	Agreement reached with KAI to manage these assets.
D8 pump, D8 basin	Owned by DRD (Assets handed over to DRD in 2014).	DRD sub-contracting Ord Irrigation Cooperative (OIC) to manage asset.
Moonamang Road, Minjiljirga Lane, Jandami Lane, Wooljim Lane	Shire of Wyndham East Kimberley (SWEK) (road assets transferred to SWEK in 2014).	SWEK to manage.
Buffer Area	MG Corporation. Buffer Area to be transferred to freehold for MG Corporation (transfer remains pending).	KAI to manage.
Area 11 (borrow pit inside Buffer Area)	Refer to Buffer Area.	KAI has access. Buffer Area management arrangements apply.

2.1.2 Knox Creek Plain

The Office of the Environmental Protection Authority (OEPA) approved the Knox Creek Plain Environmental Management Program (Knox EMP) (KBC 2015a) and the Knox Creek Plain Final Project Design Plan (Knox FPDP) (KBC 2015b) on 4 November 2015. No change in the status of this part of the proposal area has occurred since the 2015 audit period, with development (i.e. construction of channel and road infrastructure and clearing of native vegetation) of the Knox Creek Plain not yet commenced - only preliminary environmental studies including groundwater monitoring and Buffer Area vegetation and weed assessments have continued to be undertaken during this audit period.

2.2 Approvals and environmental management arrangements

The following section was first included in the 2015 CAR to provide some context regarding key points of discussion that arose in undertaking that audit, and for associated audit conclusions and recommendations. The auditors have retained the section (with minor amendments) in this CAR for the same purpose.

The M2 Area is currently subject to three separate environmental approvals with associated management plans under both the EP Act and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Table 2). These approvals have a number of complex management and monitoring requirements and although some of these requirements are relevant to more than one approval there are minor differences between the approved management plans for different approvals. Given the complex nature of the requirements and the discrepancies across approvals, the proponent is at some risk of inconsistent application of management requirements and; therefore, puts at risk the achievement of faultless compliance and conformance. In undertaking the 2015 assessment, it became apparent to the auditors that this concern, which applies broadly to management across the project, has particular application to the management and monitoring regime for surface water and groundwater. The auditors also direct the reader's attention to the existence of an Independent Review Group (IRG) for each EPBC Act approval (i.e. two separate IRGs). The IRGs are a peer review body which has relevance to the consideration of discrepancies in management and monitoring requirements of the EP Act and EPBC Act (refer to Section 2.2.2 for further detail).

Environmental approval of the project was based on the potential for each farm lot being taken up and managed by separate entities, similar to the variety of growers occupying the ORIA Stage 1 area. The auditors understand this drove much of the complexity in management requirements, particularly water management requirements, as a larger number of parties involved in environmental management was perceived to increase the risk of adverse environmental impacts.

Water management, and the IRG, are discussed in Sections 2.2.1 and 2.2.2 respectively.

Table 2 Approvals associated with ORIA Stage 2

Approval	Subject area	Proponent	Environmental management plans required
State			
EP Act - Ministerial Statement 938	M2 Area	DSD	<ol style="list-style-type: none"> 1. Weaber Plain Environmental Management Program (EMP) approved in 2013. 2. Knox Creek Environmental Management Program (Knox EMP) – considered an "Addendum" to the EMP; approved in November 2015.
Commonwealth			
EPBC Act EPBC 2010/5491	Weaber Plain	DSD	<ol style="list-style-type: none"> 1. Gouldian Finch Conservation Plan 2. Buffer Management Plan 3. Weed, Plant pathogen and Pest Management Plan 4. Aquatic Fauna Management Plan 5. Stormwater and Groundwater Discharge Management Plan 6. Groundwater Management Plan.

Approval	Subject area	Proponent	Environmental management plans required
EPBC Act EPBC 2014/7173	Knox Creek Plain	KAI	<ol style="list-style-type: none"> Sections 6 – 11 of the Knox Creek Environmental Management Program (Knox EMP) – approved in May 2015: <ol style="list-style-type: none"> Weed, Plant Pathogen and Pest Management Sub-plan. Surface Water Management Sub-plan. Groundwater Management Sub-plan. Discharge Management Sub-plan. Biodiversity and Habitat Management Sub-plan. Buffer Management Sub-plan. Bare-rumped Sheathtail Bat Management Plan. Aquatic Fauna Management Plan.

2.2.1 Groundwater and surface water management

The Environmental Protection Authority (EPA) identified groundwater and surface water as relevant environmental factors during the approval process (EPA 2001) due to potential impacts on:

- adjacent vegetation from rising groundwater levels
- the estuarine portion of Keep River from the discharge of groundwater
- farmland and adjacent vegetation from surface water alterations from farm operations
- Keep River, Border Creek and Sandy Creek from surface water discharges.

In addition, biodiversity was identified by the EPA as the environmental factor that required detailed evaluation (EPA 2000). The EPA assessment of biodiversity impacts included risks of species extinction and threats to viability of populations (including riverine species) and protection of riverine systems and riparian vegetation.

As such, the objectives of groundwater and surface water management outlined in the EMP are to:

- ensure changes to the groundwater regime (quantity and quality) resulting from the Proposal do not significantly adversely affect:
 - * vegetation (including crops) or fauna habitat within the Development area or adjacent Buffer Areas
 - * downstream riverine environment and its flora and fauna
 - * threatened aquatic fauna species in the Keep River
- minimise the potential for sedimentation of nearby waterways
- minimise the potential for chemical contaminants to enter nearby waterways
- minimise the potential for deterioration to the biological health of downstream riverine environments
- minimise the potential impacts of flooding and erosion on Point Springs Nature Reserve.

In contrast, the EPBC Act approvals were based solely on impacts on EPBC Act listed threatened species, including but not limited to, listed threatened species in the Keep River. Conditions were applied under the approvals to manage groundwater and surface water to avoid downstream impacts on the Keep River and subsequently those listed threatened species.

2.2.2 Independent Review Group

In accordance with condition 9 of EPBC 2010/5491 and condition 14 of EPBC 2014/7143, two IRGs were appointed by the approval holder to review hydrological aspects of the project and associated impacts on EPBC Act listed threatened species. The IRG consists of independent scientific and technical experts in northern Australian surface water and groundwater hydrology and aquatic fauna (specifically *Glyphis* and *Pristis* species – protected under the EPBC Act). Key tasks of the IRG include:

- provision of advice on any substantive changes to, or reviews of the Australian Government Department of the Environment and Energy (DEE) approved Aquatic Fauna Management Plan, Stormwater and Groundwater Discharge Management Plan and Groundwater Management Plan
- consultation and advice for all hydrological and aquatic fauna monitoring regimes
- assessment of any exceedance of trigger values and provision of advice in regards to exceedance
- provision of advice to the Minister for the Environment and Energy (Australian Government) when sought.

Due to there being separate proponents and EPBC Act approvals for the Weaber Plain and Knox Creek Plain developments, under both of which the IRG is mandated, there is currently no option but to have two separate IRGs. KAI has advised that this will likely be rectified when KAI becomes the proponent for Weaber Plain as intended. Nonetheless, there is a 50% membership overlap between the two groups, and targets and monitoring requirements are applied and implemented consistently.

Although the establishment of the IRGs were a requirement of the EPBC Act approvals, the role of the IRG has also been incorporated into the MS 938 EMP with nine actions explicitly requiring IRG consultation and many other related actions implicitly requiring IRG input. This incorporation occurred at the time of the 2013 EMP review, in order to streamline management action delivery under Commonwealth and State approvals. However, the IRGs were established solely for the purpose of advice and consultation in regard to EPBC Act approval requirements and as such the auditors have been advised that actions requiring IRG involvement will be implemented in the context of impacts on EPBC Act listed threatened species in the Keep River only. As stated in the 2015 CAR, it is recommended that the proponent ensure that OEPA is aware of this limitation in regard to the IRG role and that the applicable EMP actions are not related to additional EMP objectives of managing potential impacts on farmland, surrounding vegetation and nearby waterways.

2.3 Proposed changes to CAP

The structure of the CAR has been amended, with the MS 938 audit table - previously provided in the main body of the report - transferred to Appendix 1, to become Attachment 2 of the Statement of Compliance in accordance with the OEPA *Post Assessment Form for a Statement of Compliance*.

3. Audit methodology

3.1 Plan

3.1.1 Purpose and scope

Purpose

This document is the Compliance Assessment Report (CAR) addressing Phase 2 of the ORIA Project Area development.

The CAR has been prepared to address condition 4-3 of MS 938 which states:

The proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by Condition 4-1.

Condition 4-1 of MS 938 referred to above states:

The proponent shall prepare and maintain a Compliance Assessment Plan to the satisfaction of the CEO.

A Compliance Assessment Plan (CAP) was prepared to address condition 4-1 as required (Strategen 2013). The CEO referred to in condition 4-1 is the Chief Executive Officer of the Office of the Environmental Protection Authority (OEPA). The CAP was approved by the CEO of the OEPA on 2 October 2013.

Condition 4-2 of MS 938 describes what must be contained in the CAP, with point (e) of condition 4-2 requiring that the CAP shall indicate *the table of contents of compliance reports*. The approved CAP (Strategen 2013) provides this detail, replicated as Table 3 below, with an additional column indicating the corresponding section of this CAR. This CAR has been developed to align with the structure indicated in the CAP, which was guided by *Post Assessment Guideline No. 3 Preparing a Compliance Assessment Report* (OEPA 2012a).

Table 3 Table of contents for Compliance Assessment Report

Heading	Description	Section in this CAR
Introduction	Brief detail about the Project, including:	1.1
	• project background	
	• project approvals	1.2
	• proponent details.	1.3
Current status	Summary of the current implementation status of the Project, specifically milestones/achievements within the reporting period. Outline of any proposed changes to the Compliance Assessment Plan.	2
Audit methodology	Description of how the audit was undertaken including:	3.1
	• audit plan: purpose and scope, audit period, audit criteria, methodology. • audit terminology.	3.2

Heading	Description	Section in this CAR
Audit results	<p>Inclusion of a statement as to whether proponent has been, is being, has not or is not over the reporting period, complying with the:</p> <ul style="list-style-type: none"> • conditions of MS 938 • requirements of the Environmental Management Programme (EMP), Final Project Design Plan (FPDP) and Final Decommissioning Plan (FDP). <p>A breakdown of the key requirements and/or objectives of the EMP, FPDP and FDP will be provided with a declaration of compliance for each key requirement and/or objective.</p> <p>Reporting of all potential non-compliances and non-conformances, and a description of the corrective and preventative actions taken.</p> <p>Inclusion of the Ministerial Statement audit table in accordance with Table 1 of this CAP.</p> <p>Indication of any proposed changes to the Compliance Assessment Plan required by Condition 4-</p>	4 Appendix 1
Appendices	<ol style="list-style-type: none"> 1. Statement of compliance prepared in accordance with the OEPA <i>Post Assessment Form for a Statement of Compliance</i> and endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf. 2. Ministerial Statement 938 Schedule 1 audit table. 3. Environmental Management Program audit tables (potentially non-conformant items only). 4. Evidence (related to potential non-compliances/non-conformances only). <p>Other appendices may be included where relevant from time to time.</p>	Appendices (Appendix 1 now includes the MS 938 audit table as Attachment 2)

Scope

This CAR has been prepared to assess whether the proponent has been, is being, has not or is not over the reporting period (Section 3.1.2), complying with:

1. All seven conditions, including Schedule 1, of MS 938. Note condition 1-1 of MS 938 requires that:
the proponent shall implement the proposal as documented and described in Schedule 1 of this Statement, subject to the conditions and procedures of this Statement.
2. The requirements of the:
 - (a) Environmental Management Programme (EMP; comprising fifteen Management Plans or Sub-plans) in accordance with condition 5-1, which requires that:
the proponent shall implement the proposal in accordance with the "Environmental Management Programme", dated July 2011, or subsequent revisions approved by the CEO.
This includes the Knox EMP, considered an addendum to the above EMP, approved by OEPA on 4 November 2015.
 - (b) Final Project Design Plan (FPDP), in accordance with condition 6-1, which requires that:
the proponent shall implement the proposal in accordance with the "Final Project Design Plan", dated July 2011, or subsequent revisions approved by the CEO.
This includes the Knox FPDP, considered an addendum to the above FPDP, approved by OEPA on 4 November 2015.
 - (c) Final Decommissioning Plan (FDP), in accordance with condition 7-2, which requires that:
the proponent shall implement the Final Decommissioning Plan required by Condition 7-1 until such time as the CEO determines that decommissioning is complete.

An assessment of compliance with the conditions of MS 938, including with respect to implementation of Schedule 1, EMP, FPDP and FDP, is provided in Appendix 1. Further detail with respect to compliance with Schedule 1 of MS 938 and conformance with the actions of the EMP is provided Appendix 2 and Appendix 3 respectively.

3.1.2 Audit period

This CAR addresses the 12- month compliance period from 1 January 2016 to 31 December 2016.

As documented in the CAP (Section 3.1.1) the proponent will normally assess its compliance with MS 938 annually, addressing a 12-month compliance period of 1 January to the 31 December with the report submitted to the Office of Environmental Protection Authority (OEPA) by June of the following year.

3.1.3 Audit criteria

Audit criteria were based on the conditions of approvals and Schedule 1 of MS 938 and key actions of the *ORIA Stage 2-Weaber Plain Development Project Environmental Management Program* (EMP, DSD & LandCorp 2013) and the addendum *Ord River Irrigation Area Knox Creek Plain Environmental Management Program* (Knox EMP, KBC 2015).

Inherent in the audit is consideration of the:

- implementation and effectiveness of communication/reporting procedures
- controls and procedures in place to ensure implementation of management actions
- adequacy and effectiveness of the communication to personnel of matters including environmental procedures and changes to practices.

MS 938

An audit table (Appendix 1) has been prepared for condition 4-1 of MS 938 in accordance with the approved CAP (Table 3). The audit table contains each condition separated into audit elements for auditing purposes (i.e. the audit criteria), and includes the following headings:

1. Audit code: Ministerial Statement reference number.
2. Subject: The environmental theme/issue.
3. Action: What the proponent must do.
4. How: The manner in which the requirements of an audit element should be achieved.
5. Evidence: Information or data collected to verify compliance, i.e. report/letter/site inspection requirements.
6. Phase: Project phase applicable to audit element.
7. Timeframe: Specific timing for achieving the requirements of an audit element.
8. Status: Notes about the fulfilment of compliance using compliance status terms.
9. Further information: Additional comments to support compliance findings, where required.

Environmental Management Program

Audit tables containing the management and monitoring actions from the EMP and its addendum the Knox EMP have been prepared (Appendix 3). The majority of actions from the Knox EMP were identical to actions contained within the Weaber EMP; however, conformance with these actions was assessed separately for each area. Where Knox EMP actions differed, additional audit items have been included in the EMP audit tables and labelled in the item column as *KEMP*. Where an audit item is not relevant to a particular area, the item has been assessed as Not Applicable (NA).

3.1.4 Methodology

The audit included a site visit conducted between 30 August and 2 September 2016. The site Audit Team Leader was Carolyn Ellis (Strategen Environmental Consultants) with one other audit team member, Sally Finning (Strategen Environmental Consultants). Jeremy Mitchell (Strategen Environmental Consultants) undertook finalisation of the assessment; including review of the draft audit tables and related auditee follow up, due to changes in personnel prior to report completion. Interviews were conducted and a number of documents reviewed, during and after the site visit; to verify compliance or conformance. A list of persons consulted during the audit is provided in Table 4.

Table 4 Persons consulted during audit

Person and position	Organisation	Purpose
Dr Debra Pearce – Consultant	KAI	To obtain verifiable evidence to assist in determining compliance with Ministerial Statement 938 and relevant Sub-Plans.
Wayne Paul – Logistics Manager	KAI	To obtain verifiable evidence to assist in determining compliance with Ministerial Statement 938 and relevant Sub-Plans.

3.2 Terminology

The 'Status' field of the audit table (refer to Section 4, Appendix 2 and Appendix 3) describes the implementation of the action and compliance with the condition, procedure or commitment. Although the CEO of the OEPA makes the final determination of compliance, it is necessary to update this field each reporting period, as the project progresses. The OEPA (2012a, 2012b, 2012c and 2012d) has prepared guidance related to the preparation of compliance audits, including generic expressions that are used to identify the status of each item (Table 5).

Table 5 Action implementation status

Status	Description
Compliant (Conformant)	Implementation of the proposal has been carried out in accordance with requirements of the audit. (Conformant – as above in relation to actions of management plans / programs).
Completed	A requirement with a finite period of application has been satisfactorily completed.
Not required at this stage (NR)	The requirements of the audit element were not triggered during the reporting period.
Potentially non-compliant (Potentially non-conformant)	Possible or likely failure to meet the requirements of the audit element. (Potentially non-conformant – as above in relation to actions of management plans / programs).
In process	Where an audit element requires a management or monitoring plan be submitted to the OEPA or another government agency for approval, that submission has been made and no further information or changes have been requested by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending.

Source: adapted from OEPA (2012b)

4. Audit results

4.1 Compliance with conditions

The results of the audit of MS 938 are shown in Appendix 1. A total of 15 items were audited, with no potential non-compliance with conditions of MS 938 identified.

The auditors do note that of 178 audit items assessed for the Weaber Plain EMP (required to be implemented under condition 5-1), 21, or approximately 12%, of management actions were potentially non-conformant. The majority of these actions related to an aspect of formal monitoring that is currently not being undertaken, or is being partially undertaken, as prescribed in the EMP. Monitoring is; however, being undertaken as guided by the EPBC Act approval and the IRG, particularly with respect to groundwater and surface water. There has been no reported or auditor-observed material environmental impact of significance as a result of the PNCs (although the auditors note the accidental clearing of a small area of the Buffer Area as detailed in EMP 62 [Table 6 and Appendix 3] and Appendix 2: item S1_2.2).

The auditors note that most of the identified PNCs were also identified in 2014 and 2015 (i.e. they are yet to be remedied) with the overall number and percentage of PNCs increased slightly from 2015 (20 PNCs or 11%). On balance, the auditors expect the intention of the EMP is likely being met. Furthermore, KAI has advised that its intention is to review and amend the EMP in consultation with the OEPA once the transfer of proponentcy has been finalised with the State, to address the potential conformance issues identified and to ensure it can meet both its EP Act and EPBC Act obligations as the project continues to develop into its operational phase (refer to Section 4.1.2). As foreshadowed in the 2015 CAR, future assessments may conclude condition 5-1 is not being complied with if the identified ongoing PNCs are not remedied or if the number/ratio of PNCs continues to increase.

Refer to Appendix 3 for further detail.

4.1.1 Schedule 1

Condition 1-1 of MS 938 requires implementation of the proposal as documented in Schedule 1 of the Statement, therefore the results of the audit of the implementation of the key characteristics contained in Schedule 1 are outlined in Appendix 2. No potential non-compliances with Schedule 1 were identified.

4.1.2 Potential non-conformances in the Environmental Management Program

As stated in the 2015 CAR, based on feedback from KAI (and previously, LandCorp) in the conduct of the 2015 audit, and again in 2016, the auditors suggest many of the EMP potential non-conformances highlight a reasonable need for revision of these actions due to the reported:

- impracticality of implementation
- increased knowledge of actual impacts based on baseline study results
- operational experience
- prescriptive requirements not necessarily achieving best environmental outcome
- frequency of monitoring being incongruent with industry practice.

Also as discussed in the 2015 CAR, while a detailed review and resolution of these issues are outside the scope of the audit, based on their observation of the project to date the auditors are generally supportive of a revision process to reduce or streamline the environmental management and monitoring regime where possible and improve the alignment between approvals. Table 6 and Section 4.2 provide more detail on related recommendations identified by the auditors. The auditors suggest the proponent only initiate any process of review to address potential non-conformances and associated auditor recommendations in close consultation with the OEPA.

Table 6 Items assessed as potentially non-conformant

Item	Action	Comment
Weaber Plain		
EMP 20	<p><u>Monitoring:</u> Surface and subsoil ESP and pH within the project area, with a specific focus on areas with Aquitaine clay soils, including:</p> <ul style="list-style-type: none"> at least one sample from each lot a representative spread of sites throughout the Buffer Area. 	<p>The results verify that sodicity levels were measured in all lots currently being irrigated (Lot 3, 5, 14, 17 and 18) and no samples exceeded the triggers (note: measurement against the triggers is not yet required as irrigation has not been operational for five years). However, the auditors have assessed this item as potentially non-conformant due to the timing of soil sampling (refer to EMP 19 for detail).</p>
EMP 24	<p>All hydrocarbons will be stored in accordance with the following:</p> <ul style="list-style-type: none"> Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA) Australian Standard AS 1940-2004: The Storage and Handling of Flammable and Combustible Liquids. 	<p>Hydrocarbons (diesel fuel) was stored in self-bunded tanks or self-bunded trailers on Lot 3 (P_019, P_021), Lot 14 (P_024, P_025) and Lot 5 (P_020). Spare oil at Lot 5 was also observed stored in a bunded tray (P_022, P_023).</p> <p>Fuel was also stored appropriately on the service truck; however, small quantities of oil and grease were observed stored unbunded on the roof of the service truck (P_026 & P_027). KAI advised it had remedied this issue, after the completion of the audit period (P_073, P_074).</p> <p>The auditors also observed during the site visit that fuel stored associated with the generators (refer to EMP 25 below) was bunded; however, fuel hoses were located outside the bund connecting the fuel storage to the generators, potentially compromising the requirements and intent of this management action.</p> <p>The auditors consider the above to be marginal potential non-conformance issues, and recommend KAI review and monitor its hydrocarbon management practices to ensure requirements of the regulations and standards are maintained and ensure ongoing conformance.</p>

Item	Action	Comment
EMP 54	<p>Conduct weed surveys along permanent weed survey transects (and opportunistically between permanent weed survey transects) to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify and update Priority Areas for management and control. Priority Areas will be defined by:</p> <ul style="list-style-type: none"> weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%) areas that have declared noxious weed species and Weeds of National Significance (WONS) areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc. 	<p>KAI advised that original permanent transect locations established during the construction phase were no longer applicable to indicate weed impacts from farm operations. KAI advised that weed monitoring sites had been rationalised to prioritise detection of impacts from operations i.e. areas located near farming areas and bore access tracks.</p> <p>KAI also advised that surveys were not undertaken on an annual basis but were combined with the implementation of weed control measures (spraying) undertaken every 6-8 weeks (i.e. on newly established transects or survey site) and during the six-monthly groundwater monitoring rounds.</p> <p>KAI advised no new Priority Areas have been identified, or declared in consultation with the listed entities, as KAI is regularly treating the Priority weed <i>Parkinsonia</i> within the Goomig area.</p> <p>A record is kept of each monitored new transect/site, noting (primarily) the date it was last assessed, a Keighery scale rating, notes and rehabilitation assessment (presence of weeds, WONS or local priority weed species). Any Priority Areas for weed control are denoted on this record, an example of which (2016 dry season) was provided for review. The auditors consider these new sites conform with the 'opportunistic' element of the action and also to 'identify and update Priority Areas for management and control'.</p> <p>As the original permanent transects are no longer being surveyed on an annual basis the auditors assess this item as potentially non-conformant. However, the auditors acknowledge the relevance of the original transects to the operational phase of the Proposal may be limited and suggest a review of the action may be justified. The auditors expect the new 'opportunistic' sites meet the intent of the action (to provide data to inform management), but this should be confirmed.</p> <p><u>2016 recommendation:</u> The auditors recommend the action (and all other related actions, e.g. EMP 55, EMP 76) is reviewed, including confirmation of the relevance of the original transects as well as the third dot point regarding consultation.</p>
EMP 62	<p>Restrict movement of vehicles and machinery to the limits of the areas to be cleared (thus not affecting the Weaber Plain/Knox Creek Plain Buffer Area) by delineating the Weaber Plain/Knox Creek Plain Buffer Area (e.g. fence, flags and signs) prior to clearing.</p>	<p>Approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049).</p> <p>It is also possible for vehicles or machinery to access the Buffer Area along Moonamang Road, where a channel, bund or fencing does not delineate the boundary. The auditors observed that some of the Buffer Area alongside Moonamang Road was not sign-posted, fenced or flagged to prevent or deter access.</p> <p>Vehicles and machinery are otherwise restricted to limits of clearing in KAI farm lots through signage delineating the Buffer Area and bunding surrounding farm lots. Signage and bunding was sighted during site inspection and no evidence of unauthorised access (beyond the area of accidental clearing) was observed.</p> <p><u>2016 recommendation:</u> The auditors recommend installation of additional signage restricting access in high risk areas i.e. those areas where the Buffer Area is not separated from the farm lots by bunding or channels.</p>

Item	Action	Comment
EMP 76	<u>Monitoring:</u> Density/ cover/ distribution of weed species in the permanent weed survey transects and common use infrastructure areas.	<p>Density/cover/distribution of weed species in the permanent weed survey transects was not explicitly measured in the available reporting (D_010); as such, the auditors have assessed this item as potentially non-conformant.</p> <p>KAI advised that current weed control efforts are focused on controlling previously and newly identified weed growth.</p> <p>Common use infrastructure areas are also now owned and managed by others including SWEK, Water Corporation and DRD (refer to Table 1).</p> <p><u>2015 recommendation retained:</u> Potential for revision of this action should revision of the EMP occur. The monitoring history of the project to date suggests the extent of significant weeds is relatively limited throughout the Proposal area – recording of weed infestations using less formal (i.e. simple observational) parameters may be an appropriate and practicable alternative to guide and assess the effectiveness of control measures.</p>
EMP 84	Undertake monitoring of the parameters determined under Item 2 in bores established under EMP 83. <i>Item 2 refers to this item (EMP 84)</i>	<p><u>Note from 2015 audit:</u> The auditors have determined in consultation with the proponent that 'The parameters determined under Item 2' refers to the analytes listed in the Timing column. For the purposes of groundwater monitoring, 'seasonally' is taken by the proponent and KAI to be end of wet season and end of dry season monitoring, consistent with and as required under the EPBC Act Groundwater Management Plan.</p> <p>KAI advised (C_087) that for low intensity bores it has, with IRG endorsement, adopted the monitoring regime recommended by DAFWA following analysis of the 3 year baseline results (Lillicrap et al 2015). Under this regime, N, P and farm chemicals (i.e. atrazine) are monitored triennially rather than seasonally. Previous monitoring of these parameters occurred in 2015 and/or 2014.</p> <p>During the 2015 audit, KAI advised (R_001) it is unable to meet the requirement to record levels and temperature automatically on a daily basis for high intensity bores, as this relies on DAFWA data loggers that are installed in the bores that KAI do not have ongoing access to.</p> <p>The database provided (D_086, C_087) shows groundwater depth, temperature and salinity were recorded in high and low intensity bores in early May, mid-June and late September 2016. KAI advised it was also waiting for DAFWA datalogger reports, and the database includes a note stating 'Awaiting update from DAFWA re bore loggers downloaded end Sept 2016'.</p> <p>Groundwater levels, EC and pH were recorded as required for low intensity bores. However, monitoring of TDS, nutrients and pesticides was not undertaken in 2016 (D_080).</p> <p>KAI advised it is undertaking a full monitoring round in the early dry season of 2017 to bring the 'three-yearly' monitoring program into line across all bores, with every bore to be subject to 3 samples – general parameters, atrazine and metals.</p> <p>As discussed in 2015 (R_001), a variation to the EPBC Act approval 2010/5491, and/or DEE acknowledgement, may be sought based on IRG endorsement of the implemented monitoring regime.</p> <p><u>2015 recommendation retained:</u> The auditors recommend review of the groundwater monitoring regime required under the EP Act (i.e. this EMP) for both Weaber Plain and Knox Creek Plain to ensure alignment and consistency with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG to the satisfaction of the OEPA. Similarly, monitoring requirements which are dependent on a third party (DAFWA), should be considered for removal from KAI responsibility. A timing of 'seasonally' is also potentially misleading, as many of the bores within the network are inaccessible during the wet season, so instead are sampled at the start and end of the dry season.</p>

Item	Action	Comment
EMP 94	<p><u>Trigger:</u> Groundwater levels, soil salinity and quality exceed or are likely to exceed trigger levels</p> <p><u>Corrective action:</u></p> <ol style="list-style-type: none"> 1. Investigate cause. 2. Implement actions consistent with Groundwater Management Plan (Appendix 3) (e.g. modify land use/irrigation strategies, groundwater extraction). 3. Document changes in Annual Environmental Report (AER). 	<p>Soil salinity monitoring has been undertaken in the audit period, and KAI advised that no exceedances were recorded (refer to EMP 19).</p> <p>Groundwater quality data provided now includes trigger levels (D_080) for some (but not all) of the analytes listed under EMP 84. Trigger levels had not been provided for previous years' assessments [R_001]).</p> <p>The updated database indicates exceedances of trigger levels for some analytes (e.g. EC, Na, Cl) in some bores in 2016. Exceedances were also noted for these analytes as well in earlier monitoring events, which were not able to be assessed in previous years, as discussed above.</p> <p>No information was provided in relation to how the indicated exceedances were addressed.</p> <p>Given there appears to have been some exceedances detected but no information provided regarding corrective action in accordance with the EMP, the auditors conclude this item is a potential non-conformance. However, the auditors acknowledge that the groundwater and surface water monitoring and management regime has been revised based on DAFWA studies and IRG endorsement. The auditors anticipate the revised regime addresses the intention of this EMP; however, this should be confirmed with the OEPA and the EMP revised accordingly if appropriate to avoid ongoing ambiguities and potential inconsistencies.</p> <p><u>2016 recommendation:</u> The auditors recommended this action is revised to satisfaction of OEPA.</p>

Item	Action	Comment
EMP 95	<p><u>Trigger:</u> Levels of chemicals and nutrients exceed scenarios that show:</p> <ul style="list-style-type: none"> an increasing trend in the concentration of any chemical (at statistical confidence levels) an exceedance of the site-specific triggers for a particular chemical over two consecutive years. <p><u>Corrective action:</u></p> <ol style="list-style-type: none"> Implement EMP 8 and 9 (Table 14) [KEMP: item 6 (Table 14)] to better map the distribution of groundwater exceeding target levels. Investigate cause. In consultation with the IRG, identify remedial action required, which could include the modification of irrigation and agricultural practices, reducing or ceasing the use of fertiliser and/or chemicals, groundwater abstraction or a combination of these measures. Implement remedial action immediately after trigger levels are exceeded or, in consultation with the IRG, at an appropriate time. Monitor success of remedy quarterly for 12 months or, following consultation with the IRG and in accordance with the advice from the IRG, <i>(the following text from KEMP only)</i> in relation to the impacts of MNES in the Keep River. Document changes in Annual Environmental Report (AER). 	<p>Refer to EMP 93 – the information provided is inadequate to readily determine if this action has been conformed with; as such, the auditors conclude this item is potentially non-conformant. However, as discussed above, the auditors acknowledge revisions to the monitoring and management regime based on DAFWA studies and IRG advice, and anticipate these changes address the intention of this EMP; however, this should be confirmed with the OEPA and the EMP revised accordingly to avoid ongoing ambiguities and potential inconsistencies.</p> <p><u>2016 recommendation:</u> The auditors recommended this action is revised to satisfaction of OEPA.</p>
EMP 108	Refine flow trigger values for the Keep River and Border Creek gauging station based on the refined discharge dilution model and Operational Surface Water Model.	<p>Refer to EMP 106 & 107.</p> <p>As identified in 2015, the auditors were advised that flow-trigger values have still not been established; hence this item has been assessed as potentially non-conformant.</p> <p>KAI further advised: 'The combined pool volume of the K1, K2 and K3 pools is 1.26GL (Surrich 2014). In the event that a dry season flow occurred through the DW1 Gauging Station, it is likely that (a) much of the flow would soak into the dry ground, and not make it to the Keep River; and (b) if the flow was substantial enough to make it to the Keep River, flushing 1.26GL+ of freshwater from the M2 channel would flush the pools and provide for sufficient dilution. Flushing with M2 water in the event of a dry season tailwater flow is the mandated mitigation action under the EPBC approval. As such, flow trigger values are not really needed. In the event of a dry season flow, M2 channel flushing would occur to mitigate risk if the flow was sufficient to make it to the Keep River'.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of this action, subject to the advice and satisfaction of the OEPA, to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p>

Item	Action	Comment
EMP 119	<u>Monitoring:</u> Compliance of marked clearing boundary with development maps.	<p>The ground disturbance log (R_050) indicates that clearing was undertaken during the audit period.</p> <p>Environmental audits (R_039 – R_043) indicate that marked clearing boundaries are checked regularly (four times in the month of August); however, they are not checked daily as required by the action (i.e. a potential non conformance). KAI advised that it was not practical to undertake these inspections daily.</p> <p>In addition, approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049) as clearing boundaries for this clearing were not marked prior to clearing (i.e. also a potential non conformance).. The corrective actions outlined in EMP 120 were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of the frequency of this action in the EMP, to the satisfaction of the OEPA.</p>
EMP 120	<u>Monitoring:</u> Extent of clearing and ground disturbance along pre-defined boundaries.	<p>Environmental audits (R_039 – R_043) do not explicitly state that the extent of clearing is monitored. Monitoring was also not undertaken daily during this audit period (i.e. a potential non conformance).</p> <p>Approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049). The corrective actions outlined in this item were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of the environmental inspection spreadsheet to explicitly state this monitoring requirement and revision of the frequency of this action, to the satisfaction of the OEPA.</p>
EMP 125	Stabilise and revegetate areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW AND/OR DER.	<p>This item remains potentially non-conformant from the previous audit period finding. No revegetation of areas of vegetation below a rating of Very Good has been undertaken.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of revegetation requirements in consultation with the OEPA and deletion of this action if revegetation is agreed as not being necessary due to natural regeneration and other management actions being undertaken.</p>
EMP 126	In consultation with the DPW AND/OR DER and DoW, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings. Species used in such revegetation will be agreed with the DPW AND/OR DER and DoW	<p>This item remains potentially non-conformant from the previous audit period finding.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision or deletion of this action in consultation with OEPA and the indicated agencies.</p>

Item	Action	Comment
EMP 127	Undertake weed control in areas identified as containing vegetation below a rating of 'Very Good', focusing on the most degraded areas first and in accordance with procedures detailed in the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	<p>Refer to EMP 56.</p> <p>KAI advised that weed control is currently undertaken on an "as needs" basis; whereby weeds are identified and immediately controlled during ongoing environmental site inspections (R_040–R_043). However, these environmental audits and the monitoring undertaken in April–May 2016 (D_010) do not verify that weed control is being undertaken in areas containing vegetation below a rating of 'Very Good'.</p> <p>KAI further advised that '(w)eed control (namely, <i>Parkinsonia</i>) occurs regularly along the 'old D8 drain' rehabilitation area, north of Minjiljirra Lane. While the rating system may not have been adopted or updated, the weed control is occurring, thus the outcome is as intended'.</p> <p>The auditors acknowledge the above advice and expect that the intention of the action is being met as suggested. As such, this item has been assessed as technically potentially non-conformant.</p> <p><u>2016 recommendation:</u> Auditors recommend revision of this action to accurately reflect the weed control and monitoring program currently being undertaken, to the satisfaction of the OEPA</p>
EMP 133	<u>Buffer monitoring:</u> Assess vegetation condition using the Keighery (1994) rating scale and update vegetation condition map.	<p>A vegetation condition assessment using the Keighery rating scale was undertaken in April-May 2016; however updated vegetation condition mapping was not provided to the auditors. As such, this item has been assessed as potentially non-conformant.</p> <p>KAI advised that monitoring sites have been rationalised and the sites monitored in previous assessments have not been monitored in 2016.</p> <p>KAI further advised: 'Only those sites adjacent to existing tracks etc are now monitored – e.g. around bores, where human/vehicle access occurs for monitoring. Vegetation condition in all buffers has improved since the removal of cattle from the development area. Photographic evidence of buffer condition from around the development is maintained. There has been no evidence of declining buffer condition since the removal of cattle'. KAI also advised: 'KAI considers mapping unnecessary if the condition is not declining (evidenced through photographic records taken on six-monthly basis)'.</p> <p><u>2016 recommendation:</u> The auditors recommend that the proponent ensures a vegetation condition assessment and mapping is undertaken annually as required or undertake revision of this item to remove requirement for mapping, to the satisfaction of the OEPA.</p>
EMP 135	Survey reference sites identified in EMP 134 to determine indicator species, density of native species, % cover of native species, native species richness and % weed cover as outlined in the monitoring procedures.	<p>KAI advised that monitoring of rehabilitation areas is now undertaken consistent with revised buffer monitoring, whereby condition is assessed and weed presence and any inconsistency with adjacent land is noted.</p> <p>The results of monitoring provided (D_010) indicates that:</p> <ul style="list-style-type: none"> • all four rehabilitation areas are not being monitored • reference sites within those rehabilitation areas are no longer being monitored • parameters outlined in this action are not being measured • areas are not being assessed quarterly. <p>As such, this item has been assessed as potentially non-conformant.</p> <p><u>2015 recommendation retained:</u> The auditors recommend that the requirements and timing of this action be amended, in consultation with the OEPA, to six monthly as per the monitoring regime (EMP 162–164) due to local conditions (e.g. wet season); also due to the potential impact on the buffer from frequent access.</p>
EMP 162	<u>Rehabilitation monitoring:</u> Native species richness, density and % cover within rehabilitation sites as outlined in the monitoring procedures.	<p>Refer to EMP 135.</p> <p><u>2015 recommendation retained:</u> The auditors recommend the revision of this action to remove the requirement to measure plant density as there is no specific target for plant density outlined in this action.</p>

Item	Action	Comment
EMP 163	<u>Rehabilitation monitoring:</u> Indicator species in rehabilitation sites.	Refer to EMP 135.
EMP 164	Rehabilitation monitoring: Exotic species richness and % cover within rehabilitation sites as outlined in the monitoring procedures.	Refer to EMP 135.
EMP 171	Site heritage monitors from MG Corporation issued with a permit under Section 16 of the <i>Aboriginal Heritage Act 1972</i> (WA) will be on-site to monitor clearing and earthworks activities.	<p>Only minor clearing within Lot 13 was undertaken during this audit period. KAI advised that site heritage monitors from MG Corporation were not present during this clearing.</p> <p>KAI previously advised during the last audit period that this requirement is unfeasible due to the high costs involved. KAI also advised:</p> <ul style="list-style-type: none"> • it complies with the <i>Aboriginal Heritage Act 1972</i> (AH Act) • is in regular contact and maintains a strong relationship with MG Corporation management and Directors • MG Corporation is satisfied with the current arrangement. <p>To the auditors' knowledge a s 16 (of the AH Act) permit is only required if someone was intending to enter and excavate a known Aboriginal site; therefore, it appears unnecessary to require this permit for general clearing (the known sites have been excluded from clearing areas and retained in Buffer Areas).</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of this action on the advice of the MG Corporation and in consultation with the Department of Aboriginal Affairs based on the reported unfeasibility of having a monitor present during all clearing events.</p>
EMP 175	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.	KAI advised that no agreements to meet will be enacted until KAI and MG Corporation have land tenure. As such, this item remains potentially non-conformant
Knox Creek Plain		
EMP 175	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.	KAI advised that no agreements to meet will be enacted until KAI and MG Corporation have land tenure. As such, this item remains potentially non-conformant

4.2 Recommendations for revision

The previous, 2015, CAR was the first report to assess compliance since operation of the project within Weaber Plain (i.e. farming) commenced and consequently it provided an opportunity to evaluate the practicality, effectiveness and necessity of the management and monitoring actions contained within the EMP. The results of the audit showed that ongoing monitoring requirements for Weaber Plain has proved complex.

Specific recommendations for the actions that were assessed as potentially non-conformant are detailed in Table 6 (including recommendations carried over from 2015 and new, 2016, recommendations). General recommendations for EMP revision were also provided in the 2015 CAR, based on audit results and advice received from LandCorp and KAI during the preparation of the CAR. As the EMP has not been subject to revision the following 2015 CAR recommendations stand:

1. The farm lots are currently being managed by one operator (KAI) rather than the original plan for individual lot owners. This provides a basis for the need to review the entire EMP to remove reference to individual lot owners and any management actions that were included to effectively manage a number of individuals.

2. Deletion of actions that have been completed and do not need to be undertaken for future stages.
3. Amendment of actions that have proved impractical or unnecessary to implement on site given current experience operating the farm lots, while still ensuring removal of actions will not result in increased environmental impact.
4. Amendment of monitoring requirements based on increase in knowledge of the environmental impacts of the project and practicality to implement (refer to Table 6 for specific recommendations).
Note: any revision of monitoring requirements in the EMP needs to be done concurrently with revision of EPBC Act approval requirements and approved management plans to ensure consistency.
5. Amalgamation of Weaber Plain and Knox Creek Plain EMPs to remove discrepancies in management between these two plans to ensure reduced risk in potential non-conformance and a more streamlined auditing process for future CARs.
6. Evaluation of EMP against EPBC Act required management plans to ensure consistency and removal (through EMP revision) of discrepancies, while still ensuring environmental objectives of all plans will be achieved (refer to Section 2.2 for differences in surface water and groundwater objectives across approvals).
7. Potential revision of Aboriginal heritage management requirements given MG Corporation involvement in the project. Note: Any revision should be undertaken in consultation with MG Corporation and Department of Aboriginal Affairs (DAA).

Additional specific recommendations were also made in the 2015 CAR for conformant items where auditors identified the opportunity for revision. These are detailed in Table 7 and as the EMP has not been subject to revision, these 2015 recommendations stand. Additional recommendations identified in 2016 have also been identified, as denoted in Table 7.

Table 7 Recommendations for revision of conformant EMP items

Item	Action	Recommendations
EMP 19	Surface and subsoil electrical conductivity within the project area, with a specific focus on areas with Aquitaine clay soils, including: <ul style="list-style-type: none"> at least one sample from each lot a representative spread of sites throughout the Buffer Area. 	The auditors recommend revision of this action to amend timing and locations to that which is practical for onsite implementation.
EMP 29	Notify the DPW AND/OR DER of hydrocarbon spills in accordance with the Environmental Protection (Unauthorised Discharges) Regulations 2004.	There are no notification requirements outlined in the Environmental Protection (Unauthorised Discharges) Regulations 2004; as such, the auditors recommend revision of this item to refer to the use of the DER s 72 (of the EP Act) waste discharge notification form and provide more explicit guidance on the type and scale of spills that would trigger a notification.
EMP 45	Burning of vegetation will occur only at times when prevailing winds will direct smoke and ash away from residential areas	The auditors recommend deletion of this action should revision of EMP occur as no residential areas in proximity to farmland – this action was more relevant to the Phase 1 construction of the M2 Channel, now completed.
EMP 47	Proponent shall notify the nearby residences of construction activities and the predicted nature and duration of proposed burning activities	Refer to EMP 45.
EMP 55	Update the extent of Priority Areas which will be defined by: <ul style="list-style-type: none"> weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%) areas that have declared noxious weed species and Weeds of National Significance (WONS) areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc. 	The auditors recommend the action is reviewed with respect to consultation with the listed entities

Item	Action	Recommendations
EMP 85	Undertake monitoring of the chemical and nutrient parameters determined by DoW licence conditions in bores established under Item 83.	The auditors recommend deletion of this action as Department of Water (DoW) licence conditions not applicable.
EMP 88	Undertake monitoring of the bores established under Item 86 for physical, chemical and nutrient parameters as determined by DoW licence conditions if regional bore ground water quality exceeds triggers.	The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.
EMP 92	Adopt ANZECC guidelines trigger values for a 'high conservation/ecological value system' for three years then adopt appropriate site-specific trigger levels for chemicals and nutrients in accordance with ANZECC & ARMCANZ guidelines (2000).	The auditors recommend review of this action (and the groundwater monitoring requirements of the EMP generally) to be consistent with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG, to the satisfaction of the OEPA (also refer to EMP 84).
EMP 96	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system in consultation with DAFWA and the Office of the Environmental Protection Agency.	The auditors recommend revision of the wording of this action if the EMP is to be updated as the need for tailwater retention areas in each lot is no longer valid and retention areas are being constructed to receive water from more than one farm lot.
EMP 99	Determine AUSRIVAS trigger score levels for aquatic macro-invertebrates in consultation with the IRG. Updated wording of C'wealth EPBC Approval (2010/5491) condition 11f: <i>"Use of best practice multivariate analyses on species level macro-invertebrates and fish assemblage data, within an adequate experimental design (as defined in the AFMP required under condition 10), using multiple indices of 'ecological condition' and a 'weight of evidence' approach, to assess any change in ecological health of Keep River pools (K1, 2, and 3) relative to baseline and upstream reference sites'.</i>	The auditors recommend updating the wording of EMP 99, to the satisfaction of the OEPA, to reflect the intent of the varied condition 11f in the EPBC Act approval (EPBC 2010/5491) (variation dated 28 March 2014). AusRivAS trigger values are no longer required under EPBC 2010/5491 and as such should be removed from the Discharge Management Sub-plan.
EMP 100	Establish and update annually, a list of key analytes (chemicals and nutrients) to be sampled, based on-farm practices as part of ongoing water quality monitoring in consultation with DAFWA, DoW and the IRG.	The auditors recommend revise the wording of this item to exclude DoW from consultation, subject to the advice and satisfaction of the OEPA.
EMP 102	Monitor water quality at the stormwater outlet from the Development Area, in consultation with DAFWA, DoW and DPW AND/OR DER.	The auditors recommend clarifying the timing of this action to state "When flowing in the dry season" (as wet season analysis not expected to be relevant due to dilution factor and lack of on-farm activity).
KEMP 102	Monitor water quality at the stormwater outlet from the Development Area	Refer to EMP 102.
EMP 104	Monitor water flow at the stormwater outlet from the Development Area, Border Creek and the Keep River, determined in consultation with IRG, DAFWA, DoW and DPW AND/OR DER.	The auditors recommend clarifying the timing of this action to state "When flowing in the dry season". The auditors also recommend consideration be given to revision of the parties listed for consultation to the IRG, subject to the advice and satisfaction of the OEPA.

Item	Action	Recommendations
EMP 105	<p>Develop and implement an adaptive groundwater and stormwater discharge program that addresses:</p> <ul style="list-style-type: none"> • design and location of dewatering infrastructure • design and location of discharge infrastructure • discharge rates, rules and contingency actions • monitoring locations and requirements including infrastructure and setup • written evidence of any Northern Territory Government permits that are required for discharge of groundwater • management measures that ensure discharge of water will not impact on water quality in Border Creek/Keep River; this includes erosion protection measures. 	<p>The auditors recommend revision of this action in consultation with the IRG and to the satisfaction of the OEPA with respect to “stormwater discharge” as, based on the advice received, stormwater will not be deliberately discharged from the project area in the dry season as part of standard management (i.e. accidental discharge would only occur in the event of a breach of the tailwater retention system). In the wet season stormwater will overflow from all areas (inside and outside the project area) and any stormwater released above tailwater storage capacity will be subject to significant dilution.</p>
EMP 107	<p>Refine the discharge dilution model/relationship based on flow monitoring data from the Development Area and the Keep River system and water quality characteristics of stormwater from the Development Area.</p>	<p>The auditors recommend revision of this action, subject to the advice and satisfaction of the OEPA, to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p> <p>The auditors also recommend the timing of this item be revised to reflect the fact that monitoring data is only available during the wet season as there are insufficient flows during the dry season; however, irrigation and the majority of farming is carried out during the dry (i.e. reviews would be carried out annually).</p>
KEMP 125	<p><i>Stabilise and spread topsoil (if available) in areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW.</i></p>	<p>The auditors recommend revision of this action to remove reference to species lists and planting procedures as the action does not include a revegetation requirement.</p>
EMP 158	<p>Where topsoil is not available, import topsoil in consultation with the Department of Parks and Wildlife (DPW) Kununurra office.</p>	<p>The auditors recommend deletion of this action in future revisions of the EMP if topsoil is never intended to be imported.</p>

5. References

- Environmental Protection Authority (EPA) 2000 *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Kununurra Part 1 – Biodiversity Implications. Report and Recommendations of the Environmental Protection Authority*, Bulletin 988, August 2000.
- Environmental Protection Authority (EPA) 2001, *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Kununurra Part 2 – Management. Report and Recommendations of the Environmental Protection Authority*, Bulletin 1016, May 2001.
- Department of State Development and LandCorp (DSD & LandCorp) 2013, *Ord River Irrigation Area – Weaber Plain Development Project: Environmental Management Program*, October 2013.
- Kimberley Boab Consulting (KBC) 2015a, *Ord River Irrigation Area Knox Creek Plain Environmental Management Program*, Prepared for Kimberley Agricultural Investment Pty Ltd, August 2015.
- Kimberley Boab Consulting (KBC) 2015b, *Knox Creek Plain Agricultural Development Final Project Design Plan*, Prepared for Kimberley Agricultural Investment Pty Ltd, August 2015.
- Kinhill Pty Ltd (Kinhill) 2000, *Ord River Irrigation Area Stage 2 Proposed Development of the M2 Area Environmental Review and Management Program / Draft Environmental Impact Statement*, Prepared for Wesfamers Sugar Company Pty Ltd, Marubeni Corporation and The Water Corporation of Western Australia, January 2000.
- Office of Environmental Protection Authority (OEPA) 2012a, *Post Assessment Guideline for Preparing a Compliance Assessment Plan*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012b, *Post Assessment Guideline for Preparing an Audit Table*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012c, *Post Assessment Guideline for Making Information Publically Available*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012d, *Post Assessment Guideline for Preparing a Compliance Assessment Report*, OEPA, Perth, August 2012.
- Strategen 2011, *ORIA Stage 2-Weaber Plain Development Project Environmental Management Program*, report prepared for LandCorp, Rev 2, June 2011.
- Strategen 2013, *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Compliance Assessment Plan – Statement 938*, report prepared for LandCorp, September 2013.

Appendix 1
Statement of compliance

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Statement of Compliance

1 Proposal and Proponent Details

Proposal Title	<i>Ord River Irrigation Area Stage 2 (M2 Supply Channel)</i>
Statement Number	<i>938</i>
Proponent Name	<i>Minister for State Development</i>
Proponent's Australian Company Number (where relevant)	

2 Statement of Compliance Details

Reporting Period	<i>1/01/16 to 31/12/16</i>
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Implementation phase(s) during reporting period (please tick ✓ relevant phase(s))							
Pre-construction	✓	Construction		Operation	✓	Decommissioning	

Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment:	2
<p>An audit table for the Statement addressed in this Statement of Compliance must be provided as Attachment 2 to this Statement of Compliance. The audit table must be prepared and maintained in accordance with the Office of the Environmental Protection Authority's (OEPA) <i>Post Assessment Guideline for Preparing an Audit Table</i>, as amended from time to time. The 'Status Column' of the audit table must accurately describe the compliance status of each implementation condition and/or procedure for the reporting period of this Statement of Compliance. The terms that may be used by the proponent in the 'Status Column' of the audit table are limited to the Compliance Status Terms listed and defined in Table 1 of Attachment 1.</p>	

Were all implementation conditions and/or procedures of the Statement complied with within the reporting period? (please tick ✓ the appropriate box)			
No (please proceed to Section 3)		Yes (please proceed to Section 4)	✓

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS: _____

3 Details of Non-compliance(s) and/or Potential Non-compliance(s)

The information required Section 3 must be provided for each non-compliance or potential non-compliance identified during the reporting period covered by this Statement of Compliance.

Non-compliance/potential non-compliance 3-1

Which implementation condition or procedure was non-compliant or potentially non-compliant?	
Was the implementation condition or procedure non-compliant or potentially non-compliant?	
On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?	
Was this non-compliance or potential non-compliance reported to the General Manager, OEPA?	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to OEPA verbally Date _____ <input type="checkbox"/> Reported to OEPA in writing Date _____	<input checked="" type="checkbox"/> No
What are the details of the non-compliance or potential non-compliance and where relevant, the extent of and impacts associated with the non-compliance or potential non-compliance?	
What is the precise location where the non-compliance or potential non-compliance occurred (if applicable)? (please provide this information as a map or GIS co-ordinates)	
What was the cause(s) of the non-compliance or potential non-compliance?	
What remedial and/or corrective action(s), if any, were taken or are proposed to be taken in response to the non-compliance or potential non-compliance?	
What measures, if any, were in place to prevent the non-compliance or potential non-compliance before it occurred? What, if any, amendments have been made to those measures to prevent re-occurrence?	
Please provide information/documentation collected and recorded in relation to this implementation condition or procedure: <ul style="list-style-type: none"> • in the reporting period addressed in this Statement of Compliance; and • as outlined in the approved Compliance Assessment Plan for the Statement addressed in this Statement of Compliance. (the above information may be provided as an attachment to this Statement of Compliance)	

For additional non-compliance or potential non-compliance, please duplicate this page as required.

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS: _____

4 Proponent Declaration

I,, (*full name and position title*) declare that I am authorised on behalf of (being the person responsible for the proposal) to submit this form and that the information contained in this form is true and not misleading.

Signature:..... Date:.....

Please note that:

- it is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give or cause to be given information that to his knowledge is false or misleading in a material particular; and
- the General Manager of the OEPA has powers under section 47(2) of the *Environmental Protection Act 1986* to require reports and information about implementation of the proposal to which the statement relates and compliance with the implementation conditions.

5 Submission of Statement of Compliance

One hard copy and one electronic copy (preferably PDF on CD or thumb drive) of the Statement of Compliance are required to be submitted to the General Manager, OEPA, marked to the attention of Manager, Compliance Branch.

Please note, the OEPA has adopted a procedure of providing written acknowledgment of receipt of all Statements of Compliance submitted by the proponent, however, the OEPA does not approve Statements of Compliance.

6 Contact Information

Queries regarding Statements of Compliance, or other issues of compliance relevant to a Statement may be directed to Compliance Branch, OEPA:

**Manager, Compliance Branch
Office of the Environmental Protection Authority**

Postal Address: Locked Bag 10
EAST PERTH WA 6892

Phone: (08) 6145 0800

Email: compliance@epa.wa.gov.au

7 Post Assessment Guidelines and Forms

Post assessment documents can be found at www.epa.wa.gov.au in the following locations:

- Post Assessment Guidelines: Home>Policies and Guidelines>Post Assessment Guidelines;
- Post Assessment Forms: Home>Post Assessment Forms.

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS: _____

ATTACHMENT 1**Table 1 Compliance Status Terms**

Compliance Status Terms	Abbrev	Definition	Notes
Compliant	C	Implementation of the proposal has been carried out in accordance with the requirements of the audit element.	This term applies to audit elements with: <ul style="list-style-type: none"> ongoing requirements that have been met during the reporting period; and requirements with a finite period of application that have been met during the reporting period, but whose status has not yet been classified as 'completed'.
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.	This term may only be used where: <ul style="list-style-type: none"> audit elements have a finite period of application (e.g. construction activities, development of a document); the action has been satisfactorily completed; and the Office of the Environmental Protection Authority (OEPA) has provided written acceptance of 'completed' status for the audit element.
Not required at this stage	NR	The requirements of the audit element were not triggered during the reporting period.	This should be consistent with the 'Phase' column of the audit table.
Potentially Non-compliant	PNC	Possible or likely failure to meet the requirements of the audit element.	This term may apply where during the reporting period the proponent has identified a potential non-compliance and has not yet finalized its investigations to determine whether non-compliance has occurred.
Non-compliant	NC	Implementation of the proposal has not been carried out in accordance with the requirements of the audit element.	This term applies where the requirements of the audit element are not "complete" have not been met during the reporting period.

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS: _____

In Process	IP	Where an audit element requires a management or monitoring plan be submitted to the OEPA or another government agency for approval, that submission has been made and no further information or changes have been requested by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending.	<p>The term 'In Process' may not be used for any purpose other than that stated in the Definition Column.</p> <p>The term 'In Process' may not be used to describe the compliance status of an implementation condition and/or procedure that requires implementation throughout the life of the project (e.g. implementation of a management plan).</p>
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Attachment 2 Ministerial Statement 938 Audit Table

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M1.1	Implementation	The proponent shall implement the proposal as documented and described in Schedule 1 of this Statement, subject to the conditions and procedures of this Statement.	Implement Proposal as described in Schedule 1	Refer schedule 1 audit table	Overall	Ongoing	Compliant	Refer schedule 1 audit table
938:M2.1	Contact details	The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within 28 days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.	Submit written notification to the CEO of OEPA	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	Within 28 days of change of contact details.	Compliant	No changes to date
938:M3.1	Time limit for Proposal Implementation	The proponent shall not commence implementation of the proposal after the expiration of 5 years from the date of this Statement, and any commencement, within this 5 year period, must be substantial.	Commence substantial implementation of Proposal by 12 June 2018	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	By 12 June 2018	Completed	Item assessed as completed in a previous audit period.
938:M3.2	Time limit for Proposal Implementation	Any commencement of implementation of the proposal, within 5 years from the date of this Statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of 5 years from the date of this Statement.	Provide written evidence of substantial commencement of implementation on or before 12 June 2018	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	By 12 June 2018	Completed	Item assessed as completed in a previous audit period.
938:M4.1	Compliance reporting	The proponent shall prepare and maintain a Compliance Assessment Plan to the satisfaction of the CEO.	Prepare a Compliance Assessment Plan and submit to the CEO of OEPA for approval	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	Ongoing	Completed	Item assessed as completed in a previous audit period.
938:M4.2	Compliance reporting	The Compliance Assessment Plan shall indicate: 1. the frequency of compliance reporting; 2. the approach and timing of compliance assessments; 3. the retention of compliance assessments; 4. reporting of potential non-compliances and corrective actions taken; 5. the table of contents of compliance reports; and 6. public availability of compliance reports.	Prepare a Compliance Assessment Plan addressing all requirements	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	Prior to implementation	Completed	Item assessed as completed in a previous audit period.
938:M4.3	Compliance reporting	The proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by Condition 4-1.	Undertake annual compliance assessments in accordance with the approved Compliance Assessment Plan	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Overall	Ongoing	Compliant	The 2015 CAR assessed compliance with conditions in accordance with the approved CAP.
938:M4.4	Compliance reporting	The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by Condition 4-1 and shall make those reports available when requested by the CEO.	Prepare and retain Annual Compliance Assessment Reports in accordance with the approved Compliance Assessment Plan Make compliance assessment reports available to CEO of OEPA on request	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 W_004_ http://www.dsd.wa.gov.au/docs/default-source/default-document-library/ord-river-irrigation-area-stage-2_march-2015?sfvrsn=6_23092016	Overall	Ongoing	Compliant	Reports retained by Strategen and DSD. The 2015 CAR was also available on the DSD website at the time of the audit.
938:M4.5	Compliance reporting	The proponent shall advise the CEO of any potential non-compliance within 7 days.	Written correspondence to CEO of OEPA within 7 days of any potential non-compliance	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 This report	Overall	Within 7 days of a potential non-compliance being known	Compliant	No non compliances with the statement have been identified during the audit period.

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M4.6	Compliance reporting	<p>The proponent shall submit a compliance assessment report annually from the date of issue of this Statement addressing the previous twelve month period or other period as accepted by the CEO. The compliance assessment report shall:</p> <ol style="list-style-type: none"> be endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf; include a statement as to whether the proponent has complied with the conditions; identify all potential non-compliances and describe corrective and preventative actions taken; be made publicly available in accordance with the approved Compliance Assessment Plan; and indicate any proposed changes to the Compliance Assessment Plan required by Condition 4-1. 	Submit Annual Compliance Assessment Reports addressing all requirements annually to OEPA	<p>R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016</p> <p>C_005_OEPA_Ministerial Statement 938 - 2015 Ord River Expansion Project Compliance Assessment Report_25052016</p> <p>C_006_DSD_2015 Ord Irrigation Expansion Project Compliance Assessment Report_04052016</p> <p>W_004_ http://www.dsd.wa.gov.au/docs/default-source/default-document-library/ord-river-irrigation-area-stage-2_march-2015?sfvrsn=6_23092016</p>	Overall	By June 2014 and annually thereafter	Compliant	<p>The 2015 CAR was prepared and submitted by the proponent and addresses the five items outlined in this condition.</p> <p>Evidence of submission and receipt of the 2015 CAR by OEPA prior to June 2016 was sighted.</p> <p>The 2015 CAR is on the DSD website.</p>
938:M5.1	Environmental Management Program	The proponent shall implement the proposal in accordance with the "Environmental Management Programme", dated July 2011, or subsequent revisions approved by the CEO.	Implement approved Environmental Management Programme	<p>R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016</p> <p>Refer to EMP audit tables</p>	Overall	Ongoing	<p>Compliant with respect to the Weaber Plain EMP</p> <p>Compliant with respect to the Knox Creek Plain EMP</p>	<p>The original Weaber Plains 2011 EMP was revised and submitted to the OEPA in October 2013 and approved in December 2013.</p> <p>The Knox EMP was approved in November 2015 as a Part B revision of the EMP and now requires implementation for works undertaken as part of the Knox Creek Plain stage of development.</p> <p>Refer to EMP audit tables (Appendix 3).</p> <p><u>Weaber Plain</u></p> <p>Of 178 audit items assessed for the Weaber EMP:</p> <ul style="list-style-type: none"> 75 were 'conformant' 66 were 'completed' 1 was partly 'completed', partly 'not required at this stage' 1 was partly 'conformant', partly 'completed' 12 were 'not required at this stage' 2 were 'unable to audit' 21 were 'potentially non-conformant (PNC)'. <p>Approximately 12%, of management actions were potentially non-conformant. The majority of these actions related to an aspect of formal monitoring that is currently not being undertaken, or is being partially undertaken, as prescribed in the EMP. Monitoring is; however, being undertaken as guided by the EPBC Act approval and the IRG, particularly with respect to groundwater and surface water. There has been no reported or auditor-observed material environmental impact of significance as a result of the PNCs (although the auditors note the accidental clearing of a small area of the Buffer Area as detailed in EMP 62 [Table 6 and Appendix 3] and Appendix 2: item S1_2.2). The auditors note that most of the identified PNCs were also identified in 2014 and 2015 (i.e. they are yet to be been remedied) with the overall number and percentage of PNCs increased slightly from 2015 (20 PNCs or 11%). On balance, the auditors expect the intention of the EMP is likely being met. Furthermore, KAI has</p>

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
								<p>advised that its intention is to review and amend the EMP in consultation with the OEPA once the transfer of proponency has been finalised with the State, to address the potential conformance issues identified and to ensure it can meet both its EP Act and EPBC Act obligations as the project continues to develop into its operational phase. As foreshadowed in the 2015 CAR, future assessments may conclude condition 5-1 is not being met if the identified ongoing PNCs are not remedied or if the number/ratio of PNCs continues to increase.</p> <p><u>Knox Creek Plain</u> Of 162 management actions assessed for the Knox EMP:</p> <ul style="list-style-type: none">• 6 were 'conformant'• 6 were 'completed'• 149 were 'not required at this stage'• one was 'potentially non-conformant'. <p>Less than 1% of management actions were potentially non-conformant.</p> <p>Please note the 12 items previously assessed as 'completed' were re-evaluated in this CAR, resulting in a revision from 12 in 2015 to six 'completed' actions in 2016.</p> <p>Refer to Appendix 3 for further detail.</p>
938:M6.1	Final Project Design	The proponent shall implement the proposal in accordance with the "Final Project Design Plan", dated July 2011, or subsequent revisions approved by the CEO.	Implement approved Final Project Design Plan	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 R_049_KAI_Environmental incident report_18042016 D_010_KAI_April-May 2016 Buffer Condition_00052016 C_071_OEPA_Ministerial Statement 938 Notification of Clearing Event_00072016 C_072_DER_Subject: Clearing of Native Vegetation in a Designated Buffer in the Goomig Farmland_24062016	Overall	Ongoing	Completed for Weaber Plain Compliant for Knox Creek Plain	<p>Condition previously assessed as Completed (for the Weaber Plain). Note that approximately 3.35 ha of vegetation within the Weaber Plain Buffer Area, as described in the Final Project Design Plan, was accidentally cleared in April 2016 and reported as an incident (R_049).</p> <p>The corrective actions outlined in EMP 120 (refer to 'Biodiversity and habitat monitoring regime' audit table) were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken. Given the regulators' response and as the clearing was inadvertent and subject to rehabilitation (as compared to the clearing being intentional and the disturbed area permanently converted to uses inconsistent with its purpose as a buffer) the auditors have not assessed this to be a potential non-compliance.</p> <p>A Final Project Design Plan (FPDP) has been prepared and approved for the Knox Creek Plain stage of the Stage 2 development in the previous audit period. The Knox FPDP has been classed as an addendum (Part B) to the 2011 (Weaber Plain) FPDP and as such requires implementation. No ground works were commenced in the audit period - assessment of compliance with the approved design will proceed once ground disturbance occurs.</p>

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M7.1	Final Decommissioning Plan	At least six months prior to the anticipated date of decommissioning, or at a time accepted by the CEO, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in a suitable condition, with no liability to the State. The Final Decommissioning Plan shall be prepared in accordance with "Preliminary Decommissioning Plan", approved as part of the "Environmental Management Programme" dated July 2011 and required by Condition 5-1, or subsequent revisions approved by the CEO. The Final Decommissioning Plan shall address: 6. removal or, if appropriate, retention of plant and infrastructure; 7. rehabilitation of all disturbed areas to a standard suitable for the accepted new land use(s); and 8. identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.	Prepare a Final Decommissioning Plan addressing all requirements and submit to CEO of OEPA for approval in accordance with timeframe	Final Decommissioning Plan	Overall	At least six months prior to the anticipated date of decommissioning or at a time accepted by the CEO	NR	Decommissioning relates to a later phase
938:M7.2	Final Decommissioning Plan	The proponent shall implement the Final Decommissioning Plan required by Condition 7-1 until such time as the CEO determines that decommissioning is complete.	Implement Final Decommissioning Plan	Annual Compliance Assessment Report	Decommissioning	Until such time as the CEO determines that decommissioning is complete	NR	Decommissioning relates to a later phase
938:M7.3	Final Decommissioning Plan	The proponent shall make the Final Decommissioning Plan required by Condition 7-1 publicly available, to the requirements of the CEO.	Make Final Decommissioning Plan available to stakeholder or public upon request and within 7 days of the receipt of the request	Final Decommissioning Plan publicly available	Overall	To the requirements of the CEO	NR	Decommissioning relates to a later phase

Appendix 2
Schedule 1 audit table

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Schedule 1 audit table

Audit Code	Element	Description	Evidence	Status	Comments
S1_2.1	Land within the Project Area	Project Area 76 000 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 C_063_KBC_Re: MS 938 ORIA Stage 2 Audit_03112016	Compliant	A total of 193 ha of land for irrigable development was cleared during this audit period. A total of 7210.97 ha in Weaber Plain have been developed as land for irrigation since commencement with an additional 914.12 ha cleared for infrastructure, for a total of 7932.09 ha.
S1_2.2		Land managed as buffer 42 500 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 R_049_KAI_Environmental incident report_18042016 D_010_KAI_April-May 2016 Buffer Condition_00052016 C_071_OEPA_Ministerial Statement 938 Notification of Clearing Event_00072016 C_072_DER_Subject: Clearing of Native Vegetation in a Designated Buffer in the Goomig Farmland_24062016	Compliant	The previous compliance report indicated 11 562.41 ha has been set aside and managed as buffer, relating to the Weaber Plain stage (now referred to as Goomig) of the proposal. The EMP and FPDP for the Knox Creek Plain stage of development was approved last audit period with an additional 6417 ha to be managed as buffer, for a total of 17 979 ha. Management of the buffer associated with Knox Creek Plain is yet to commence as the project has not commenced construction. Note that approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049). The corrective actions outlined in EMP 120 (refer to 'Biodiversity and habitat monitoring regime' audit table) were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken. Given the regulators' response and as the clearing was inadvertent and subject to rehabilitation (as compared to the clearing being intentional and the disturbed area permanently converted to uses inconsistent with its purpose as a buffer) the auditors have not assessed this to be a potential non-compliance.
S1_2.3		Land for irrigable development 30 500 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 C_063_KBC_Re: MS 938 ORIA Stage 2 Audit_03112016	Compliant	A total of 193 ha of land for irrigable development was cleared during this audit period. A total of 7210.97 ha in Weaber Plain have been developed as land for irrigation since commencement.
S1_2.4		Infrastructure area 3000 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	No change since previous audit period. As constructed shapefiles indicate 914.12 ha were cleared to 29 October 2013 (no more clearing for infrastructure has occurred since that date).
S1_2.5	Land outside the Project Area	M2 channel (lake Kununurra to project area) 690 ha	KAI advice (31-Aug-2016)	NR	No clearing has occurred in relation to channel works outside the Project area.
S1_2.6		Wyndham Port Facilities 1 ha	KAI advice (31-Aug-2016)	NR	No activity associated with the Wyndham Port Facilities has occurred or is required at this stage.
S1_2.7	Production	Raw sugar 400 000 tpa	KAI advice (31-Aug-2016)	NR	No production of raw sugar has occurred.
S1_2.8		Molasses 160 000 tpa	KAI advice (31-Aug-2016)	NR	No production of molasses has occurred.
S1_2.9	Infrastructure	Irrigation channels 160 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	37 km channel of constructed to date. No change since previous audit period.
S1_2.10		Annual water requirements 740 GL	C_081_OIC_RE: KAI water use for 2016 season - for environmental auditors_13122016 KAI advice (12-Jan-2016)	Compliant	KAI advised a total of 13.784 ML was used in 2016 (for irrigation), with an additional 539.6ML supplied to refill the M2 channel in November 2016, following maintenance by contractors for Water Corporation (C_081)
S1_2.11		Drains 153 km*	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	No change since previous audit period. 51 km of major drains constructed to date
S1_2.12		Flood protection levees 142 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	No change since previous audit period. 48 km of flood protection levees constructed to date.
S1_2.13		Balancing storage dams (operating volume) 5.6 GL	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	No change since previous audit period. Storage Dams for Weaber Plain are contained within the M2 channel between M2C3 and M2C4. The reach of the M2 channel between the M2C3 and M2C4 structures holds up to 390 ML, of which 100 ML is considered 'Operational Storage', i.e. balancing storage.
S1_2.14		Roads 161 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2016)	Compliant	No change since previous audit period. 11.9 km of road has been constructed to date.
S1_2.15		Power lines 165 km	KAI advice (31-Aug-2016) Site inspection (1-Sept-2016)	NR	No construction of power lines has occurred to date.
S1_2.16	Wyndham Port	Raw sugar store 180 000 t	KAI advice (31-Aug-2016)	NR	Construction has not yet commenced.
S1_2.17		Molasses store 75 000 t	KAI advice (31-Aug-2016)	NR	Construction has not yet commenced.

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Appendix 3
Environmental Management Program
audit tables

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Audit tables relevant to sub-plans of the ORIA Stage 2 Environmental Management Plan – dated October 2013

Note: For audit purposes the numbering of Environmental Management Plan (EMP) items is sequential rather than the numbering used in the original document. Where the wording of an EMP item makes reference to other EMP items Strategen has referenced the sequential number. Please also note the “Responsibility” column indicates responsibility for each action as previously (i.e. prior to the 2016 audit) advised by LandCorp and KAI. As LandCorp is no longer involved in the project and the auditors were not provided with a substitute with which to update the column, the auditors suggest responsibility for actions listed solely with LandCorp now sits with the proponent.

Soil conservation management actions

Soil conservation management actions									
Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Education									
EMP 1.	Provide an Information Package to the owner/leaseholder, which outlines: <ul style="list-style-type: none">the susceptibility of soil from disturbed areas to erosion from high intensity rainfall during the wet seasonsoil erosion prevention measuresirrigation strategies to reduce potential impacts of sodicity and salinityprocedures to monitor soil salinity and sodicity.	To reduce the potential for agricultural practices to result in erosion by ensuring prospective landowners are aware of the appropriate risks and management measures.	At sub-lease/sale of lots	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	Completed	Item assessed as completed for Weaber Plain. As the same leaseholder (KAI) is responsible for Knox Creek Plain, this item has been assessed as completed.
Induction									
EMP 2.	Induct construction personnel on soil erosion control management measures.	To reduce the potential for construction activities to result in erosion by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	KAI	KAI advice (31-Aug-2016)	NR	KAI advised that no construction activities were undertaken during this audit period.	NR	Construction not yet commenced.
Construction									
EMP 3.	Maintain records of ground disturbing activities that include the date that the boundary of clearing was delineated, the date of clearing and location of topsoil storage.	To provide data to inform management.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 4.	Restrict ground-disturbing activities to the dry season wherever practicable.	To prevent ground-disturbing activities when the risk of erosion is high.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 5.	Ensure a drainage management system that includes a sediment trap is in place around all borrow pits.	To reduce the potential for erosion of borrow pits to result in adverse environmental impacts.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 6.	Delineate the boundaries of the vegetation to be cleared for construction in the field with flagging tape, signage or fencing.	To minimise erosion by preventing unauthorised ground disturbance.	Prior to ground disturbance	KAI	Site inspection (31-August-2016) KAI advice (31-August-2016)	NR	LandCorp completed clearing associated with project infrastructure during the 2013 audit period. KAI is not constructing shared infrastructure; however, clearing of farm lots is occurring. Post-construction clearing management is discussed under other audit items (including EMP 7, EMP 8). No clearing of farm lots was observed during the site visit.	NR	Construction not yet commenced.
EMP 7.	Stage clearing of vegetation so that areas are cleared only as required.	To reduce the potential for erosion by minimising the area of ground surface exposed at any one time, to allow native animals the chance to move on.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period (as does not relate to clearing of farm lots).	NR	Construction not yet commenced.
EMP 8.	Restrict movement of construction machinery and equipment to designated tracks and roads.	To prevent unauthorised ground disturbance.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
Topsoil									
EMP 9.	Maintain records of topsoil stockpiles that include the location of stockpile and location of where topsoil was removed from.	To ensure topsoil is utilised in the most appropriate locations.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 10.	Remove topsoil from:	To provide a natural source of	During	LANDCORP /	R_001_Strategen_Ord River Irrigation Area	Completed	Item assessed as completed in a previous	NR	Construction not yet

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
	<ul style="list-style-type: none"> all areas to be excavated all areas where spoil from excavation is to be stored. 	seed, organic matter and microorganisms for areas to be rehabilitated.	construction of shared infrastructure	KAI	Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016		audit period.		commenced.
EMP 11.	Stockpile cleared topsoil and subsoil separately, away from irrigation channels, for later use in rehabilitation in accordance with the Rehabilitation Management Sub-plan	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 12.	Install topsoil containment measures such as sediment fencing around stockpiles.	To reduce potential for erosion of topsoil stockpiles.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
Buffer									
EMP 13.	Install signage to prevent unauthorised access to the buffer in accordance with the Buffer Management Sub-plan.	To prevent damage to the buffer from unauthorised access.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not scheduled to commence until 2016.
Rehabilitation									
EMP 14.	Rehabilitate areas disturbed as a result of construction that are no longer required post-construction in accordance with the Rehabilitation Management Sub-plan.	To maximise the potential for successful rehabilitation.	As specified in the Rehabilitation Management Sub-plan	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period. Refer to Rehabilitation audit tables regarding rehabilitation monitoring for monitoring and assessment of rehabilitation success.	NR	Construction not scheduled to commence until 2016.

Soil monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
Construction										
EMP 15.	Soil erosion within 50 m of construction activities.	Weekly during construction of shared infrastructure	No soil erosion occurring as a result of construction activities.	<div>1. Investigate cause of erosion.</div> <div>2. Investigate ways to minimise erosion and increase landform stability.</div> <div>3. Implement remedy.</div> <div>4. Monitor success of remedy.</div>	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 16.	Management of top soil stockpiles.	Weekly during construction of shared infrastructure	Topsoil stockpiles are being managed appropriately, including no indication of erosion present.	<div>1. Investigate cause of erosion.</div> <div>2. Investigate ways to minimise erosion and increase landform stability.</div> <div>3. Implement remedy.</div> <div>4. Monitor success of remedy.</div>	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 17.	Extent of clearing and ground disturbance along pre-defined boundaries.	Weekly during construction of shared infrastructure	No clearing or disturbance outside of pre-defined boundaries (Figure 2).	<div>1. Report as Environmental Incident and initiate Incident Procedure</div>	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
Operation										
EMP 18.	Soil erosion within 50 m of infrastructure (including roads, channels, sediment basins and hillside drains).	As required after construction, e.g. after significant rainfall events.	Landform is safe and stable with no soil erosion occurring as a result of runoff from infrastructure.	<div>1. Investigate cause.</div> <div>2. Identify ways reduce erosion produced as a result of infrastructure such as reducing runoff velocity, diverting runoff and application of hydromulch to areas identified as susceptible to erosion from runoff.</div> <div>3. Implement remedy.</div> <div>4. Monitor success of remedy.</div>	Water Corporation	Site inspection (31-August-2016) KAI advice (31-August-2016) P_018_Strategen_31082016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016	Conformant	Erosion of the M2 channel was observed at one location. KAI advised (31-Aug-2016) that Water Corporation was to be notified. The auditors note that the erosion was within the channel itself; as such, the environmental impact on landforms surrounding infrastructure (in this case the M2) is deemed negligible. <u>Note:</u> Ownership of M2 and M2S channels has been transferred to Water Corporation.	NR	Construction not yet commenced.
EMP 19.	Surface and subsoil electrical conductivity within the project area, with a specific	Twelve monthly, commencing prior to clearing and at	Salinity levels do not exceed 400 mS/m in surface or subsurface soils.	<div>1. Map the distribution of soil with salinity exceeding target levels.</div> <div>2. Investigate cause (which could include determining if salinity is due to a rise in the groundwater or whether the soil</div>	KAI	KAI advice (31-August-2016) D_007_CSBP_2016 Soil testing results_19082016 I_054_Goomig Farm Management Units and	Conformant	KAI advised that surface and subsoil monitoring of was undertaken in April and July 2016. Results (D_007) and locations (I_054) of the July monitoring were provided. The results verify that salinity levels were	NR	Construction not yet commenced.

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
	focus on areas with Aquitaine clay soils, including: <ul style="list-style-type: none">at least one sample from each lota representative spread of sites throughout the Buffer Area.	the end of each dry season during operation of irrigation infrastructure.		<p>chemical status is deteriorating as a result of insufficient irrigation).</p> <p>3. Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling sodicity in accordance with the Groundwater Management Sub-plan.</p> <p>4. Identify whether remedial action is required, such as installation of field drains in accordance with the Groundwater Management Sub-plan.</p> <p>5. Implement remedial action on a trial basis in areas identified from mapping.</p> <p>6. Monitor success of remedy, increasing the frequency of soil monitoring if salinity exceeds target levels.</p>		Soil Sampling Locations_01112016 C_065_KBC_Re: MS 938 ORIA Stage 2 Audit_01112016		<p>measured in all lots currently being irrigated (Lot 3, 5, 14, 17 and 18) and no samples exceeded the trigger of 400 mS/m. The auditors have assessed this item as potentially non-conformant for the following reason:</p> <p>1. Samples were not taken at the 'end of the dry season'.</p> <p>KAI advised that 'black soils' were impenetrable when dry, thus samples had been collected earlier in the season when soils were not as hard.</p> <p>The auditors also note KAI advised that one sample (10WP31) depicted on the location map as on the boundary of Lot 18 and the Buffer Area (I_054) was actually taken within the Buffer Area; however, the auditors remain uncertain this completely addresses the requirement for 'a representative spread of sites throughout the Buffer Area' (when considered in the context of currently farmed lots) and suggest KAI confirm and/or refine this requirement with the OEPA and DAFWA.</p> <p><u>2016 recommendation:</u> The auditors recommend revision of this action to amend timing and locations to that which is practical for onsite implementation.</p>		
EMP 20.	Surface and subsoil ESP and pH within the project area, with a specific focus on areas with Aquitaine clay soils, including: <ul style="list-style-type: none">at least one sample from each lota representative spread of sites throughout the Buffer Area.	Twelve monthly, commencing prior to clearing and at the end of each dry season during operation of irrigation infrastructure.	Sodicity levels five years after commencement of irrigation do not exceed an ESP of 6 in surface soils or 15 in subsurface soils.	<p>1. Map the distribution of soil with sodicity exceeding target levels.</p> <p>2. Investigate cause (which could include determining if changes are consistent with the anticipated initial response to land use change, or whether the soil chemical status is deteriorating as a result of insufficient irrigation).</p> <p>3. Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling sodicity in accordance with the Groundwater Management Sub-plan.</p> <p>4. Identify whether remedial action is required, such as application of gypsum or sulphur.</p> <p>5. Implement remedial action on a trial basis in areas identified by mapping.</p> <p>6. Monitor success of remedy, increasing the frequency of soil monitoring if salinity exceeds target levels.</p>	KAI	KAI advice (31-August-2016) D_007_CSBP_2016 Soil testing results_19082016 I_054_Goomig Farm Management Units and Soil Sampling Locations_01112016	PNC	The results verify that sodicity levels were measured in all lots currently being irrigated (Lot 3, 5, 14, 17 and 18) and no samples exceeded the triggers (note: measurement against the triggers is not yet required as irrigation has not been operational for five years). However, the auditors have assessed this item as potentially non-conformant due to the timing of soil sampling (refer to EMP 19 for detail).	NR	Construction not yet commenced.

Chemicals management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Education									
EMP 21.	Prospective land managers will be advised of the requirement to comply with procedures for chemical application, and chemical management legislation including:: <ul style="list-style-type: none">Agricultural and Veterinary Chemicals Code Act 1994 (Cwth) and associated acts and regulationsHealth (Pesticides) Regulations 2011Aerial Spraying Control Act 1966 (WA)Agricultural Produce (Chemical Residues) Act 1983 (WA)Poisons Act 1964 (WA)Veterinary Preparations and Animal Feeding Stuffs Act 1976 (WA)Agriculture and Related Resources (Spraying Restriction) Regulations 1979.	To reduce the potential for contamination of the environment by farm chemicals by ensuring that farm owners/managers are aware of the specified procedures for chemical application in the project area and informed of their rights and responsibilities under the relevant Acts and Regulations.	At sub-lease of lots.	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
Induction									
EMP 22.	Induct personnel on safe use of chemicals and hydrocarbon management measures, including hydrocarbon handling, disposal and spill response procedures.	To reduce the risk of contamination of the environment.	Within one week of personnel commencing work on site	KAI	R_002_KAI_Ord Irrigation Expansion Project_Environment Induction_00002016 R_003_KAI Induction Register_00000000 KAI advice (31-Aug-2016)	Conformant	Formal inductions are undertaken by KAI for its farm workforce that includes management of hydrocarbons and chemicals. The Induction Register was provided (R_003). The induction package (R_002) contains information pertaining to the safe use of chemical and hydrocarbon management measures, including handling, disposal and spill response.	NR	Construction not yet commenced.
Storage and transport of chemicals									
EMP 23.	Ensure storage of farm chemicals complies with relevant Australian and Western Australian Standards, including AS 2507-1998 “The storage and handling of agricultural and veterinary chemicals” and Department of Water Toxic and Hazardous Substances – Storage and Use WQPN No. 65.	To prevent potential contamination of the environment and harm to individuals by ensuring appropriate storage and handling of chemicals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	No farm chemicals stored on site.	NR	Construction not yet commenced.
EMP 24.	All hydrocarbons will be stored in accordance with the following: <ul style="list-style-type: none">Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA)Australian Standard AS 1940-2004: The Storage and Handling of Flammable and Combustible Liquids.	To minimise the potential for hydrocarbon contamination of the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016; 24-Jan-2017) P_019 P_020 P_021 P_022 P_023 P_024 P_025 P_026 P_027 P_073 P_074	PNC	Hydrocarbons (diesel fuel) was stored in self-bunded tanks or self-bunded trailers on Lot 3 (P_019, P_021), Lot 14 (P_024, P_025) and Lot 5 (P_020). Spare oil at Lot 5 was also observed stored in a bunded tray (P_022, P_023). Fuel was also stored appropriately on the service truck; however, small quantities of oil and grease were observed stored unbunded on the roof of the service truck (P_026 & P_027). KAI advised it had remedied this issue, after the completion of the audit period (P_073, P_074). The auditors also observed during the site visit that fuel stored associated with the generators (refer to EMP 25 below) was bunded; however, fuel hoses were located outside the bund connecting the fuel storage to the generators, potentially compromising the requirements and intent of this management action. The auditors consider the above to be marginal potential non-conformance issues, and recommend KAI review and monitor its hydrocarbon management practices to ensure requirements of the regulations and standards are maintained and ensure ongoing conformance.	NR	Construction not yet commenced.
EMP 25.	Generators will be located on bunded platforms to contain any fuel leaks.	To minimise the potential for spills and leaks to contaminate the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016; 24-Jan-2017; 17-May-2017)	Conformant	Generators on the Goomig site are located at the Lot 3 shed/compound and at the Area 11 borrow pit. These generators are self-bunded.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
					P_028		At all other sites where infrastructure is present (e.g. Tailwater return facilities at Lot 3/5, Lot 14) there are no generators present on site. These locations have self-bunded fuel storage, connected by hose to motors which drive the pumping.		
EMP 26.	Maintain appropriate spill response equipment and Material Safety Data Sheet (MSDS) information in all hydrocarbon storage and re-fuelling areas and maintenance areas.	To minimise the potential for spills and leaks to contaminate the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) P_021 P_033 P_034 P_035 P_036	Conformant	The auditors observed MSDS attached to self-bunded fuel storage tanks on Lot 3 (P_033), Lot 5 (P_021), and within the cab of the service truck (P_035). Spill response equipment was observed on the service truck (P_034 & P_036).	NR	Construction not yet commenced.
EMP 27.	Persons designated as responsible for the storage and handling of fertiliser on farms be provided with appropriate training and instruction.	To prevent potential contamination of the environment by ensuring appropriate storage and handling of fertilisers.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	KAI advised that fertiliser was sourced on an as-needs basis by personnel with appropriate training and instruction. The auditors note that training and instruction deemed 'appropriate' is not defined in the EMP.	NR	Construction not yet commenced.
EMP 28.	Transport dangerous goods in accordance with the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA).	To ensure dangerous goods are stored appropriately during transport (e.g. on absorbent material, provision of spill kit, well-ventilated, appropriate documentation and provision of personnel protection equipment for safe handling).	Ongoing from commencement of ground disturbance	KAI	N/A	Unable to audit	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA) is beyond the scope of this audit.	NR	Construction not yet commenced.
EMP 29.	Notify the DPW AND/OR DER of hydrocarbon spills in accordance with the Environmental Protection (Unauthorised Discharges) Regulations 2004.	To ensure potential spills are appropriately assessed and remediated according to the Environmental Protection (Unauthorised Discharges) Regulations 2004 as hydrocarbons are a Schedule 1 Material in these Regulations.	In accordance with Incident Response Procedure	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	KAI advised that no significant spills have occurred and none were detected during site inspection. <u>Note:</u> KAI advised that the minor spill observed in Area 11 in 2015 was remediated. Auditors observed no remaining evidence of this spill. <u>2015 recommendation retained:</u> There are no notification requirements outlined in the Environmental Protection (Unauthorised Discharges) Regulations 2004; as such, the auditors recommend revision of this item to refer to the use of the DER s 72 (of the EP Act) waste discharge notification form and provide more explicit guidance on the type and scale of spills that would trigger a notification.	NR	Construction not yet commenced.
Application of chemicals									
EMP 30.	Maintain registers of all chemicals applied on-site as required under applicable chemical usage legislation.	To provide data for review if monitoring indicates unacceptable impacts to the environment.	Ongoing from commencement of ground disturbance	KAI	KAI advice (31-Aug-2016) R_008_KAI_KAI Spraying Logs_07072016 R_009_Lone Eagle Spraying Logs_31072016	Conformant	KAI maintains a "Spraying Log" of all chemicals applied on site. Example Spraying logs were provided from 28 and 29 June 2016, and 7 July 2016 (R_008). KAI also maintains records of any aerial spraying undertaken. Example aerial spraying logs were provided from 25 and 31 July 2016 (R_009). The auditors note that such records may not specifically constitute a 'register', but deem that the intent of the management action is met. The auditors also note that chemical usage legislation deemed 'applicable' is not specified in the EMP.	NR	Construction not yet commenced.
EMP 31.	Restrict chemical and fertiliser use when the tailwater retention capacity is unavailable	To prevent the transporting of nutrients and chemicals downstream	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	KAI advised that tailwater is held in storage dams, and there has been no tailwater overflow to date as the tailwater retention capacity has not been reached. No evidence observed by the auditors of any exceedance of tailwater capacity.	NR	Construction not yet commenced.
EMP 32.	Commercial pesticide and herbicide spraying will be undertaken only by operators with the	To minimise spray drift.	Ongoing from commencement	KAI	KAI advice (31-Aug-2016) R_008_KAI_KAI Spraying Logs_07072016	Conformant	KAI advised that pesticide and herbicide spraying is undertaken only by operators	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
	appropriate level of ChemCert accreditation.		of ground disturbance		R_009_Lone Eagle Spraying Logs_31072016 R_012_TAFE_Langford Chemical Use Certification_18052015 R_013_AusChemWA_Dwyer Chemical Use Accreditation_00000000 R_070_AusChemWA_(Clive) Wayne Paul Chemical Use Accreditation_00000000 R_014_DAFWA_Pilot Chemical Rating Certificate_29052015 R_058_DAFWA_Pilot Chemical Rating Certificate_28062016		with the appropriate level of ChemCert accreditation (R_012, R_013 and R_070). Spraying Logs (R_008) provided verify that the Operator is primarily B. Langford (Barney) (R_012). Aerial spraying (R_008) is undertaken by Lone Eagle (Lance Conley) who has appropriate certification from Department of Agriculture and Food WA (DAFWA) (R_058).		
EMP 33.	Ensure agricultural chemicals are not directly applied to dedicated on-farm access tracks.	To prevent off-site transportation of chemicals in dust lift-off from access tracks.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	KAI advised chemicals are not directly applied to farm tracks. No evidence observed by the auditors of application of chemicals on dedicated on-farm tracks.	NR	Construction not yet commenced.
EMP 34.	Chemicals will be applied in accordance with the product label.	To prevent potential contamination of the environment by ensuring appropriate application of chemicals.	Ongoing from commencement of ground disturbance	KAI	R_008_KAI_KAI Spraying Logs_07072016 R_009_Lone Eagle Spraying Logs_31072016 R_068_Agbitech_Vivusmax_00000000 R_069_Agbitech_Optimol_00072012 R_075_United Phosphorous Ltd_Blazer_04022011 R_076_NovaSource_Linuron DF_00000000 R_077_Dow AgroSciences_Verdict_00000000	Conformant	Example Spraying Logs provided indicated chemicals have been applied at rates within the application rate range outlined on the product labels	NR	Construction not yet commenced.
Aerial spraying									
EMP 35.	Maintain a register of all aerial spraying operations.	To minimise potential for environmental impacts by ensuring aerial spraying is carried out in an acceptable manner.	Ongoing from commencement of ground disturbance	KAI	R_009_Lone Eagle Spraying Logs_31072016	Conformant	Refer to EMP 30. KAI maintains records of any aerial spraying undertaken (R_009). Example logs were sighted during the audit.	NR	Construction not yet commenced.
EMP 36.	Use accredited operators (e.g. by operators and pilots accredited under the Aerial Agricultural Association of Australia (AAAA) "Spraysafe" program)	To minimise potential for environmental impacts by ensuring aerial spraying is carried out in an acceptable manner, to determine extent of required spray fall-out monitoring.	Ongoing from commencement of ground disturbance	KAI	R_014_DAFWA_Pilot Chemical Rating Certificate_29052015 R_058_DAFWA_Pilot Chemical Rating Certificate_28062016	Conformant	DAFWA Pilot Chemical Rating Certificate for aerial spraying contractor (Lance Conley of Lone Eagle) provided (R_014, R_058).	NR	Construction not yet commenced.
EMP 37.	Notify neighbours within: <ul style="list-style-type: none"> 1500 m of an area to be sprayed with ultra-low volume 750 m of an area to be sprayed with emulsifiable concentrate by air. Consideration should be given to provide a range of dates in case conditions are not conducive to safely apply the pesticide and to minimise spray drift.	To minimise the risk of adverse health effects caused by spray fall-out.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	No neighbours within 1500 m of areas that have been sprayed.	NR	Construction not yet commenced.
Mixing and washdown facilities									
EMP 38.	Design chemical washdown facilities in accordance with Department of Water, Water Quality Protection Notes on: <ul style="list-style-type: none"> Mechanical Equipment Washdown (WQPN No. 68) Chemical Blending (WQPN No. 7). 	To minimise potential for environmental impacts by ensuring appropriate siting (location), design and construction of chemical wash down facilities.	Prior to commencement of planting of crops	KAI	KAI advice (31-Aug-2016) R_015_Strategen_Ord Irrigation Area-Weaber Development Project Procedure C5 Mechanical Equipment Washdown_02072013	Conformant	No washdown facilities are currently located on farms within the Project area. KAI provided a procedure for equipment washdown (R_015), which is currently only undertaken at a compound outside of the Proposal area. No washdown facilities were inspected during the audit as the compound is located outside the Project area.	NR	Planting of crops not expected to commence until 2018 at the earliest.
EMP 39.	All chemical blending and decanting will be undertaken within a fully-contained area.	To minimise potential for environmental impacts by ensuring chemical spills are contained.	Ongoing from commencement of irrigation	KAI	KAI advice (31-Aug-2016)	Conformant	All chemical blending and decanting is currently undertaken at a compound outside of the Proposal area.	NR	Irrigation not yet commenced.
Emergency response									
EMP 40.	Develop emergency response procedures in accordance with Department of Water, Water Quality Protection Note <i>Contaminant spills – emergency response</i> (WQPN No. 10).	For determining the appropriate level of response according to the degree (or classification) of the spill.	Prior to commencement of planting of crops	KAI	KAI advice (31-Aug-2016) R_016_Strategen_Ord Irrigation Area-Weaber Plain Development Project Procedure C6 Spill Response_02072013 R_017_Strategen_Ord Irrigation Area-Weaber Plain Development Project Procedure M1 Environmental Emergency	Conformant	Two (Draft) procedures were provided relating to emergency response: Spill response (R_016) and Environmental Emergency response (R_017). R_017 states: "The response to a chemical spill to a waterway is guided by the Department of Water, Water Quality Protection Note	NR	Planting of crops not expected to commence until 2018 at the earliest.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
					Response_02072013		Contaminant spills – emergency response (WQPN No. 10).” <u>2016 recommendation</u> : The auditors recommend the procedures provided be finalised and authorised by KAI for implementation.		
Disposal									
EMP 41.	Dispose empty chemical containers in accordance with the AgSafe guidelines for disposal of containers.	To minimise potential for environmental impacts by minimising chemical residue in disposed chemical containers.	Ongoing from commencement of irrigation	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Empty chemical containers are stored off site at the KAI compound and then routinely collected through a “drum muster” by Shire of Wyndham East Kimberley. An assessment specifically against the AgSafe guidelines was not conducted as part of this audit – the auditors have assumed that participation in the drum muster meets the AgSafe guidance. No empty containers were observed within the Project area.	NR	Irrigation not yet commenced.

Chemical use monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 42.	Inspection of permanent hydrocarbon storage facilities.	Three monthly	All hydrocarbon storage devices comply with appropriate standards and/or regulations	1. Non-compliant hydrocarbon storage devices to be replaced/repared as appropriate.	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Permanent hydrocarbon storage facilities were observed on Lot 3, Lot 5 and Lot 14. KAI advised that these self-bunded storage devices were routinely inspected (at a greater frequency than 3-monthly), although no records were maintained of inspections. KAI also discussed the progressive replacement of existing temporary hydrocarbon storage devices with permanent self-bunded alternatives. <u>2016 recommendation</u> : The auditors recommend inspection records (for this and other regular monitoring items) are developed and maintained (e.g. checklist).	NR	Construction not yet commenced.
EMP 43.	Survey vegetation in the Buffer Area for symptoms of damage typical of chemicals being used in the ORIA.	Annually	No detectable impact on the buffer	1. Investigate the cause. 2. Investigation opportunities to prevent re-occurrences. 3. Inform farm owners of outcomes of the survey. 4. In the event of chemical discharge contrary to Environmental Protection (Unauthorised Discharges) Regulations 2004, report to DPW AND/OR DER.	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Refer to EMP 52, EMP 54 and EMP 76. KAI advised that due to a poor wet season in 2015-16, there had been little vegetation growth in the buffer, leading to little requirement to spray for weeds. No symptoms of damage had been recorded to date. The auditors did not observe any indications of buffer vegetation damaged by spray drift during the site inspection.	NR	Construction not yet commenced.
EMP 44.	Inspect storage facilities and mixing and washdown areas, and surrounds for chemical spills.	Daily during spray operations Monthly at other times	No chemical spills	1. Implement emergency response. 2. Classify appropriate response. 3. Notify authorities if High or Moderate incident impact classifications. 4. Review Emergency Response Plan (for High and Moderate incident impact classes). 5. Prepare and implement follow-up environmental monitoring (in consultation with DPW AND/OR DER and DoW as required).	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Chemicals not mixed or stored within the Proposal area.	NR	Construction not yet commenced.

Dust and particulate management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 45.	Burning of vegetation will occur only at times when prevailing winds will direct smoke and ash away from residential areas	To minimise the potential for smoke and ash to affect nearby residents	Ongoing from commencement of ground disturbance	KAI	R_048_SWEK_Permit to set fire to the bush_26052016	Conformant	No nearby residential areas. KAI burn in accordance with permits issued by SWEK. Example permits provided for periods 27 May-14 June 2016, 17 June-1 July 2016, 25-31 July 2016 & 3-17 August	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							2016. <u>2015 recommendation retained:</u> The auditors recommend deletion of this action should revision of EMP occur as no residential areas are located in proximity to farmland – this action was more relevant to the Phase 1 construction of the M2 Channel, now completed.		
EMP 46.	Provide prospective farm owners/leasees documentation on practices to prevent dust emissions	To reduce the potential for dust generation by minimising ground disturbance	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Sub-lease yet to occur.
EMP 47.	Proponent shall notify the nearby residences of construction activities and the predicted nature and duration of proposed burning activities	To reduce the potential for community impact by ensuring effective communication	As required	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	No nearby residences. <u>2015 recommendation retained:</u> Refer to EMP 45 - potential to delete this action should revision of EMP occur.	NR	Construction not yet commenced.
EMP 48.	Cleared construction surfaces and stockpiles will be watered and/or stabilised where practicable to reduce dust lift-off	To reduce the potential for environmental and community impacts by reducing the potential for dust generation	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 49.	Speed limits will be sign-posted and implemented in the project area and will reflect local conditions	To reduce the potential for environmental impacts by reducing the potential for dust generation	Ongoing from commencement of ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Dust and particulate monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 50.	Visual monitoring	Daily during construction of shared infrastructure	No off site impact on amenity	1. Investigate cause. 2. Implement additional dust control measures, as appropriate.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 51.	Monitor community issues associated with dust/burning	During construction of shared infrastructure	No public complaints relating to dust generated by the project	Public complaints will be recorded and responded to in accordance with the Community Issues Management Sub-plan.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Weed, plant pathogen and pest animal management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment

Baseline information

EMP 52.	Conduct a weed survey in the common user infrastructure areas and adjoining areas (up to 100 m) within the Weaber Plain Buffer Area to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify Priority Areas for management and control. Priority Areas will be defined by: <ul style="list-style-type: none"> weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%) areas that have declared noxious weed species and Weeds of National Significance (WONS) areas declared as local priority in consultation with DPW AND/OR DER and DAFWA 	To provide data to inform management.	Prior to ground disturbance	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 52).
KEMP 52	Conduct a weed survey to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify Priority Areas for management and control. Priority Areas will be defined by: <ul style="list-style-type: none"> weed infested areas (e.g. monocultures of 	To provide data to inform management.	Prior to ground disturbance	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	Completed	Item assessed as completed in a previous audit period.

	<p><i>neem trees, weed density/cover greater than 50%)</i></p> <ul style="list-style-type: none"> • <i>areas that have declared noxious weed species and Weeds of National Significance (WONS)</i> • <i>areas declared as local priority in consultation with DPaW, DAFWA and Ord Land and Water Inc.</i> 								
EMP 53.	<p>Establish permanent weed survey transects within 100 m into the Weaber Plain/Knox Creek Plain Buffer Area.</p>	To ensure repeatability of ongoing weed monitoring.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	<p>This item was reported in a previous compliance assessment as not having occurred prior to ground disturbance as required by the action (and therefore, potentially non-conformant).</p> <p>LandCorp has undertaken remedial action by since establishing weed transects, which were first established and surveyed commencing August 2013.</p> <p>As the PNC has been remedied, the auditors now consider this action completed.</p>	Completed	Ten weed transects were established during the 2015 Weed Survey of the Knox Creek Plain Buffer Area. Ord Land and Water confirmed these transects are within 100 m into the Buffer Area.
EMP 54.	<p>Conduct weed surveys along permanent weed survey transects (and opportunistically between permanent weed survey transects) to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify and update Priority Areas for management and control. Priority Areas will be defined by:</p> <ul style="list-style-type: none"> • weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%) • areas that have declared noxious weed species and Weeds of National Significance (WONS) • areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc. 	To provide data to inform management.	Annually, from commencement of ground disturbance	KAI	<p>D_010_KAI_April-May 2016 Buffer Condition_00052016</p> <p>KAI advice (31-Aug-2016; 24-Jan-2017)</p>	PNC	<p>KAI advised that original permanent transect locations established during the construction phase were no longer applicable to indicate weed impacts from farm operations. KAI advised that weed monitoring sites had been rationalised to prioritise detection of impacts from operations i.e. areas located near farming areas and bore access tracks.</p> <p>KAI also advised that surveys were not undertaken on an annual basis but were combined with the implementation of weed control measures (spraying) undertaken every 6-8 weeks (i.e. on newly established transects or survey site) and during the six-monthly groundwater monitoring rounds.</p> <p>KAI t advised no new Priority Areas have been identified, or declared in consultation with the listed entities, as KAI is regularly treating the Priority weed <i>Parkinsonia</i> within the Goomig area.</p> <p>A record is kept of each monitored new transect/site, noting (primarily) the date it was last assessed, a Keighery scale rating, notes and rehabilitation assessment (presence of weeds, WONS or local priority weed species). Any Priority Areas for weed control are denoted on this record, an example of which (2016 dry season) was provided for review. The auditors consider these new sites conform with the 'opportunistic' element of the action and also to 'identify and update Priority Areas for management and control'.</p> <p>As the original permanent transects are no longer being surveyed on an annual basis the auditors assess this item as potentially non-conformant. However, the auditors acknowledge the relevance of the original transects to the operational phase of the Proposal may be limited and suggest a review of the action may be justified. The auditors expect the new 'opportunistic' sites meet the intent of the action (to provide data to inform management), but this should be confirmed.</p> <p><u>2016 recommendation:</u> The auditors recommend the action (and all other related actions, e.g. EMP 55, EMP 76) is reviewed, including confirmation of the relevance of the original transects as well as the third dot point regarding consultation.</p>	NR	Construction not yet commenced.
EMP 55.	<p>Update the extent of Priority Areas which will be defined by:</p> <ul style="list-style-type: none"> • weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%) 	To provide data to inform management.	Annually, from commencement of ground disturbance	KAI	<p>D_010_KAI_April-May 2016 Buffer Condition_00052016</p> <p>KAI advice (31-Aug-2016)</p>	Conformant	<p>Refer to EMP 54.</p> <p>The 'opportunistic' new survey sites are accepted by the auditors as constituting an update of the extent of Priority Areas.</p> <p>A record of transect monitoring is kept;</p>	NR	Construction not yet commenced.

	<ul style="list-style-type: none"> • areas that have declared noxious weed species and Weeds of National Significance (WONS) • areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc. 						identifying instances of weed infestation, WONS and local priority weed species. <u>2016 recommendation:</u> The auditors recommend the action is reviewed with respect to consultation with the listed entities.		
EMP 56.	Develop and undertake a weed control program in Priority Areas with the exception of roads.	To ensure effective control of weeds by the appropriate parties.	Prior to ground disturbance	KAI	R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016 R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016 R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016 R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016 KAI advice (31-Aug-2016)	Conformant	Refer to EMP 54. KAI are implementing an ongoing weed control (spraying) program targeting <i>Parkinsonia aculeata</i> , recorded in the monthly environmental audit spreadsheets (R_039 – R_043). Although the weed control program is not the same one developed prior to ground disturbance, the purpose of the item is considered by the auditors as being met by current management methods.	NR	Construction not scheduled to commence until 2016.
Induction									
EMP 57.	Implement an induction program for personnel which contains information on: <ul style="list-style-type: none"> • hygiene procedures for all vehicles, machinery and equipment upon entering and leaving the Weaber Plain Development Area and/or Priority Areas • specific soil management requirements in Priority Areas • requirement to remain within designated clearing areas. 	To reduce the risk of construction activities introducing and/or spreading weeds and plant pathogens by ensuring construction personnel are aware of appropriate management measures and requirements.	Within one week of personnel commencing work on-site	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	This action has been interpreted to relate to construction of shared infrastructure only (based on the purpose) and as such has been assessed as completed for the Weaber Plain phase of the Project.	NR	Construction not yet commenced.
Education									
EMP 58.	Prepare guidelines for prospective farmers/lessees that contains information on: <ul style="list-style-type: none"> • vehicle hygiene measures (e.g. issues of using machinery from southern WA or interstate) • identification, control and reporting of weeds (e.g. weed control in tail water ditches, use of fire) • identification and reporting of pest animals, declared noxious weed species and signs of plant pathogens • obligations under the Agricultural and Related Resources Protection Act 1976 (WA) (including the requirement for the occupier of any private land to control declared plants and declared animals on and in relation to that land) • selection of pet animals (e.g. discourage cat ownership) • selection of crops (e.g. no declared noxious weed species) • irrigation and drainage of land (i.e. no water from farming allotments directed into the Weaber Plain Buffer Area). 	To reduce the risk of agricultural activities introducing and/or spreading weeds, plant pathogens and pest animals by ensuring farm owners/managers are aware of appropriate management measures and requirements.	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 59.	Develop and supply an information package to prospective farm owners/lessees/managers within the project area that contains: <ul style="list-style-type: none"> • a weed identification key for all species known to occur in the area (key to be developed in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water) • possible control techniques (information on controlling declared noxious weed species can be obtained from DAFWA [2003]) • general soil management and hygiene requirements for farms • reporting requirements. 	To reduce the risk of agricultural activities introducing and/or spreading weeds, plant pathogens and pest animals by ensuring farm owners/managers are aware of appropriate management measures and requirements.	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
Clearing/stockpiling									
EMP 60.	Topsoil from areas with known declared weed species will managed accordance with DAFWA	To reduce the risk of declared weed species being	During clearing of farm lots	KAI	Site inspection (31-Aug-2016)	Conformant	KAI advised that there are no DAFWA requirements for topsoil from areas with	NA	Item not included in Knox EMP.

	requirements.	introduced into/ spread throughout the Buffer Area.			KAI advice (31-Aug-2016)		known declared weed species. KAI advised that topsoil is not being used and remains in situ. Any weeds present are burnt or controlled using Round-up during clearing.		
Irrigation channel									
EMP 61.	Aquatic weed control shall be undertaken consistent with industry standards	To reduce the risk of aquatic weeds being introduced into/ spread throughout natural watercourses and wetlands near the project area.	Ongoing from commencement of irrigation	KAI	KAI advice (31-Aug-2016) C_064_Water Corporation_Acrolein injections_19042016	Conformant	Aquatic weed control within the main M2 and M2S channels using acrolein injections was undertaken by Water Corporation on 13 April 2016 (C_064). KAI advised that smaller channels that are the responsibility of KAI and DRD had been periodically dry, reducing the requirement for weed control.	NR	Irrigation not yet commenced.
Hygiene									
EMP 62.	Restrict movement of vehicles and machinery to the limits of the areas to be cleared (thus not affecting the Weaber Plain/Knox Creek Plain Buffer Area) by delineating the Weaber Plain/Knox Creek Plain Buffer Area (e.g. fence, flags and signs) prior to clearing.	To reduce the risk of weeds being introduced into/ spread throughout the Buffer Area by limiting access.	Ongoing from commencement of ground disturbance	KAI	R_049_KAI_Environmental incident report_18042016 Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	PNC	Approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049). It is also possible for vehicles or machinery to access the Buffer Area along Moonamang Road, where a channel, bund or fencing does not delineate the boundary. The auditors observed that some of the Buffer Area alongside Moonamang Road was not sign-posted, fenced or flagged to prevent or deter access. Vehicles and machinery are otherwise restricted to limits of clearing in KAI farm lots through signage delineating the Buffer Area and bunding surrounding farm lots. Signage and bunding was sighted during site inspection and no evidence of unauthorised access (beyond the area of accidental clearing) was observed. <u>2016 recommendation:</u> Auditors recommend installation of additional signage restricting access in high risk areas i.e. those areas where the Buffer Area is not separated from the farm lots by bunding or channels.	NR	Construction not yet commenced.
EMP 63.	Access into the Weaber Plain/Knox Creek Plain Buffer Area will be via designated access tracks only.	To reduce the risk of weeds being introduced into/ spread throughout the Buffer Area by limiting access.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016) P_037 P_038	Conformant	KAI advised that access tracks through the Buffer Area are not signposted with vehicle speeds, hygiene protocols etc. to minimise the risk of unauthorised access (i.e. signage would only draw attention to these access tracks and increase likelihood of unauthorised access).	NR	Construction not yet commenced.
EMP 64.	Establish clean down site/s at access points to the Weaber Plain Buffer Area, rehabilitation areas (outside of the Buffer Area) and Priority Areas. The clean down site/s will be designed to ensure soil is collected and disposed of in a manner that does not allow the introduction or spread of weeds or plant pathogens. At each permanent clean down site there will be a sign describing the hygiene procedure/s required to be implemented.	To prevent the introduction/ spread of weeds and plant pathogens in the Weaber Plain Buffer Area, rehabilitation areas and Priority Areas.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP
EMP 65.	Clean down all machinery entering the Weaber Plain Development Area to remove vegetative matter, seeds and soil.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 65).
KEMP 65	<i>Clean down all large machinery entering the Knox Creek Plain Development Area for the first time, to remove vegetative matter, seeds and soil. Each vehicle will be given a 'hygiene sticker' indicating that they have been checked and assessed for hygiene performance.</i>	<i>To prevent the introduction/ spread of weeds and plant pathogens in the project area.</i>	<i>Ongoing from commencement of ground disturbance</i>	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 66.	Undertake a vehicle hygiene check for all vehicles/machinery entering the construction site for the first time. Each vehicle will be given a 'hygiene sticker' indicating that they have been checked and assessed for hygiene performance.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
EMP 67.	Record in a hygiene log book (located at all clean-down sites) the:	To provide hygiene data to inform management.	During construction of shared	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.

	<ul style="list-style-type: none"> time and date of clean down of machinery/vehicle/equipment method of cleaning machinery and vehicles signature of the driver (and vehicle hygiene inspector if first inspection). 		infrastructure		Assessment Report - Statement 938_04052016				
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Imported material									
EMP 68.	Certify all soil and fill material sourced from outside the project area as disease and weed free in accordance with DAFWA and DPW AND/OR DER requirements. If certificates cannot be obtained a risk assessment will be carried out on the soil material and only material that is evaluated as a very low risk of having environmental or declared noxious weeds or plant pathogens will be permitted for use.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	No external fill used by KAI during this audit period.	NR	Construction not yet commenced.
EMP 69.	Inspect borrow pits and borrow pit access tracks prior to disturbance to ensure weed species are not present. If any weeds are present, they will be cleared and controlled (e.g. physical removal, spray, disposal off-site, burning) from the affected areas prior to commencement of borrow extraction.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	Prior to ground disturbance	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not scheduled to commence until 2016.

Rehabilitation									
EMP 70.	Rehabilitate disturbed areas that are not to be utilised post-construction in accordance with the Rehabilitation Management Sub-plan.	To re-establish native vegetation and reduce and control weed cover.	During construction of shared infrastructure / <i>During construction</i>	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Pest animals									
EMP 71.	Ensure that waste that may attract pest animals is properly disposed of as far as is practicable.	To prevent the encouragement of pest animals by ensuring effective waste disposal.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016)	Conformant	KAI advised that wallabies and kangaroos constitute pest animals in this case; however, the site is very cleanly kept (and the auditors assume 'pest' is meant to apply to introduced species – most commonly through the life of this project this has applied to cattle). No waste that would attract pest animals was observed during site inspection. Some inert packaging waste was observed adjacent to fuel storage on Lot 14; KAI advised it would be collected.	NR	Construction not yet commenced.
EMP 72.	Undertake pest eradication program within Buffer Area.	To reduce the risk of pest animals becoming established within the Buffer Area.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	KAI advised a cattle muster was undertaken in the Buffer Area in early August 2016 which removed 71 cattle. However, as with 2015, no correspondence was provided regarding this event. A small number of cattle were observed in the Buffer Area during the site inspection as removal of stock is an ongoing process. No other pests (e.g. cats) were observed in the Buffer Area during the site inspection.	NR	Construction not yet commenced.
EMP 73.	Install signs at the entry point to any access tracks in the Weaber Plain/Knox Creek Plain Buffer Area to discourage people from entering the area.	To reduce the risk of feral cats and dogs becoming established in the Buffer Area.	Prior to commencement of planting of crops	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Refer to EMP 63. KAI advised that access tracks through the Buffer area were limited to gazetted roads or tracks that would only be detectable using GPS. Signage denoting restricted access to the Buffer Area was observed at the intersections of gazetted roads with Moonamang Road. No signage has been placed at other locations so as not to attract unnecessary traffic.	NR	Planting of crops not expected to commence until 2018 at the earliest.
EMP 74.	Ensure stock are removed from the Buffer Area.	To remove stock as an ongoing source of land degradation and a vector for introducing and spreading weeds throughout the Buffer Area.	Ongoing from commencement of ground disturbance	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016)	Conformant	Refer to EMP 72.	NR	Construction not yet commenced.

Weed, plant pathogen and pest animal monitoring regime

Item	Activity and	Frequency*	Target	Corrective action	Responsibility	Evidence	Weaber Plain	Knox Creek Plain
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	location						Status	Comment	Status	Comment
EMP 75.	Weed species found along permanent weed survey transects in the buffer	Annually	No new plant pathogens or weed species observed or recorded in the mapped area during construction. No new Priority Areas during construction.	<ol style="list-style-type: none"> 1. Map the extent of any new Priority Areas. 2. Map the distribution of the newly introduced species. 3. Identify activities that may have potentially introduced the species. 4. Plan and implement a monitoring or control treatment program. 5. Re-educate contractors/farm owners/managers of the importance of hygiene control measures. 	KAI	Refer to EMP 54	Conformant	Refer to EMP 54.	NR	Construction not yet commenced.
EMP 76.	Density/ cover/ distribution of weed species in the permanent weed survey transects and common use infrastructure areas.	Annually	No more than a 10% statistical increase in weed species density/ cover/distribution compared to the results of initial weed survey. No new Priority Areas	<ol style="list-style-type: none"> 1. Map the extent of any new Priority Areas. 2. Map the revised extent of the specific weed species within the site. 3. Identify activities that may have potentially spread the weed species. 4. Plan and implement a weed control treatment program. 5. Apply hygiene control and education measures. 	KAI	Refer to EMP 54 LandCorp advice (15-Dec-2015) D_010_KAI_April-May 2016 Buffer Condition_00052016	PNC	<p>Density/cover/distribution of weed species in the permanent weed survey transects was not explicitly measured in the available reporting (D_010); as such, the auditors have assessed this item as potentially non-conformant.</p> <p>KAI advised that current weed control efforts are focused on controlling previously and newly identified weed growth.</p> <p>Common use infrastructure areas are also now owned and managed by others including SWEK, Water Corporation and DRD (refer to Table 1).</p> <p><u>2015 recommendation retained:</u> Potential for revision of this action should revision of the EMP occur. The monitoring history of the project to date suggests the extent of significant weeds is relatively limited throughout the Proposal area – recording of weed infestations using less formal (i.e. simple observational) parameters may be an appropriate and practicable alternative to guide and assess the effectiveness of control measures.</p>	NR	Construction not yet commenced.
EMP 77.	Presence of declared weeds in farm lots.	As required	No declared weed species present.	<ol style="list-style-type: none"> 1. Notify DAFWA if required. 2. Investigate cause. 3. Undertake weed control in accordance with DAFWA requirements. 4. Monitor success of weed control. 	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016) R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016 R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016 R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016 R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016	Conformant	KAI advised Parkinsonia had been observed and had been subject to spraying (R-039–R_043), but was being monitored further to ensure the spraying regime is successful.	NR	Construction not yet commenced.
EMP 78.	Feral animals (including stock) in the Weaber Plain / Knox Creek Plain Buffer Area	As required	No new pest animals or sightings of feral animals	<ol style="list-style-type: none"> 1. Investigate cause. 2. Undertake eradication program as required. 3. Undertake intervention or remediation works (e.g. reduce bins, trapping, re-education). 	KAI	Refer to EMP 72	Conformant	Refer to EMP 72.	NR	Construction not yet commenced and Buffer Area yet to be fenced.

Surface water management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Induction									
EMP 79.	Induct personnel on surface water management measures, including: <ul style="list-style-type: none">M2 channel may receive effluent from the Kununurra Wastewater Treatment Plantthe potential risks from <i>Burkholderia pseudomallei</i>, which is found dormant in soils and the potential for its dispersion through irrigation processes.	To reduce the potential for activities to adversely affect surface water values by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 79).
KEMP 79	Induct personnel on surface water management measures.	To reduce the potential for activities to adversely affect surface water values by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	KAI	NA	NA	NA	NR	Construction not yet commenced.
Flood protection									
EMP 80.	Construct levees at the perimeter of farmland adjacent to Border Creek/Knox Creek to protect them from 1 in 20 year ARI flooding.	To protect farmland, prevent sedimentation of farm soil in Border Creek or the Keep River system.	Prior to commencement of planting of crops	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Planting of crops not expected to commence until 2018 at the earliest.
EMP 81.	Locate all drains on less permeable soils to minimise seepage to groundwater where possible. Where deeper drains are required, the excavated surface of the drain will be compacted to reduce seepage.	To reduce accessions to groundwater.	Prior to commencement of planting of crops	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Planting of crops not expected to commence until 2018 at the earliest.

Surface water monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 82.	Inspect areas along the banks of channels, watercourses and drainage devices downstream and adjacent to the project area for evidence of erosion.	Ongoing from commencement of ground disturbance	No exposed surfaces outside the channel from which erosion could occur	<ol style="list-style-type: none"> Investigate cause. Implement erosion protection measures, such rock armouring or application of hydromulch to areas identified. Monitor the effectiveness of remedy. 	KAI	Refer to EMP 18 KAI advice (31-Aug-2016) R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016 R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016 R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016 R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016	Conformant	Refer to EMP 18. KAI noted that channels are inspected, with inspections recorded in environmental audit checklists (R_039–R_043).	NR	Construction not yet commenced.

Groundwater management and monitoring actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Groundwater levels and quality (as it relates to salinity management)									
EMP 83.	Expand the groundwater monitoring bore network to include: <ul style="list-style-type: none">at least 20 'high intensity'† regional boresat least 30 'low intensity'† regional bores. Regional bore locations shown in Appendix 3	To allow the collection of baseline and ongoing groundwater data to guide management.	Install prior to commencement of clearing of farm lots and at least 18 months before the commencement of irrigation.	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 83).
KEMP 83	Expand the groundwater monitoring bore network to include: <ul style="list-style-type: none">'high intensity' regional bores (i.e. auto loggers installed)'low intensity' regional bores (i.e. no auto loggers installed but monitored manually).	To allow the collection of baseline and ongoing groundwater data to guide management.	Install prior to commencement of clearing of farm lots, a minimum of 18 months prior to irrigation.	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	Conformant	KAI advised no changes from the previous audit period (i.e. no new bores had been installed as construction not yet scheduled to commence), but that existing bores are still being monitored.
EMP 84.	Undertake monitoring of the parameters determined under Item 2 in bores established under EMP 83. Item 2 refers to this item (EMP 84)	To collect baseline and ongoing groundwater data to determine any adverse effects to the receiving environment as a result of the Proposal.	Commencing 18 months prior to commencement of irrigation. High intensity bores: <ul style="list-style-type: none">groundwater levels and temperature (automatic, daily)EC, pH, TDS, major cations and anions, nutrients and pesticides seasonally. Low intensity bores: <ul style="list-style-type: none">groundwater levels, EC, pH, TDS, nutrients and pesticides seasonally.	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 D_052_2016 groundwater monitoring results_00002016 D_080_KAI_Goomig Knox Groundwater Database_11012017 D_086_KAI_Goomig Knox Groundwater Database to end 2016_16022017 C_087_KAI_And here's the groundwater database that I thought I'd sent you in Feb_16052017	PNC	<u>Note from 2015 audit:</u> The auditors have determined in consultation with the proponent that 'The parameters determined under Item 2' refers to the analytes listed in the Timing column. For the purposes of groundwater monitoring, 'seasonally' is taken by the proponent and KAI to be end of wet season and end of dry season monitoring, consistent with and as required under the EPBC Act Groundwater Management Plan. KAI advised (C_087) that for low intensity bores it has, with IRG endorsement, adopted the monitoring regime recommended by DAFWA following analysis of the 3 year baseline results (Lillicrap et al 2015). Under this regime, N, P and farm chemicals (i.e. atrazine) are monitored triennially rather than seasonally. Previous monitoring of these parameters occurred in 2015 and/or 2014. . During the 2015 audit, KAI advised (R_001) it is unable to meet the requirement to record levels and temperature automatically on a daily basis for high intensity bores, as this relies on DAFWA data loggers that are installed in the bores that KAI do not have ongoing access to. The database provided (D_086, C_087) shows groundwater depth, temperature and salinity were recorded in high and low intensity bores in early May, mid-June and late September 2016. KAI advised it was also waiting for DAFWA datalogger reports, and the database includes a note stating 'Awaiting update from DAFWA re bore loggers downloaded end Sept 2016'. Groundwater levels, EC and pH were recorded as required for low intensity bores. However, monitoring of TDS, nutrients and pesticides was not undertaken in 2016 (D_080). KAI advised it is undertaking a full monitoring round in the early dry season of 2017 to bring the 'three-yearly' monitoring program into line across all bores, with every bore to be subject to 3 samples – general parameters, atrazine and metals. As discussed in 2015 (R_001), a variation to the EPBC Act approval 2010/5491, and/or DEE acknowledgement, may be sought based on IRG endorsement of the implemented monitoring regime. <u>2015 recommendation retained:</u> The auditors recommend review of the groundwater monitoring regime required under the EP Act (i.e. this EMP) for both Weaber Plain and Knox Creek Plain to ensure alignment and consistency with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG to the satisfaction of the OEPA. Similarly, monitoring requirements which are dependent on a third party (DAFWA), should be considered for removal from KAI responsibility. A timing of 'seasonally' is also	NA	Item amended in Knox EMP (refer to KEMP 84). Also refer to the comments for the Weaber Plain part of this item.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							potentially misleading, as many of the bores within the network are inaccessible during the wet season, so instead are sampled at the start and end of the dry season.		
<i>KEMP 84</i>	<i>Undertake monitoring of the parameters below for bores established under Item 1 (KEMP 83)</i> <i>High intensity bores:</i> <ul style="list-style-type: none"> <i>groundwater levels and temperature (automatic, daily)</i> <i>EC, pH, TDS, nutrients and pesticides seasonally</i> <i>Low intensity bores:</i> <ul style="list-style-type: none"> <i>groundwater levels, EC, pH, TDS, nutrients and pesticides seasonally.</i> 	<i>To collect baseline and ongoing groundwater data to determine any adverse effects to the receiving environment as a result of the Proposal.</i>	<i>Commencing 18 months prior to commencement of irrigation.</i>	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	NR	Baseline groundwater monitoring has commenced. Refer to EMP 84 (for Weaber Plain) regarding monitoring of atrazine (pesticides). As irrigation is not scheduled to commence until 2018 at the earliest, this item has not been assessed as NR.
EMP 85.	Undertake monitoring of the chemical and nutrient parameters determined by DoW licence conditions in bores established under Item 83.	To collect baseline and ongoing groundwater data.	Annually at commencement of dry season commencing 12 months prior to operation of irrigation infrastructure.	KAI	KAI advice (31-Aug-2016)	Unable to audit	Bores are for monitoring purposes only, i.e. no extraction; therefore, do not require a licence. <u>2015 recommendation retained:</u> The auditors recommend deletion of this action as Department of Water (DoW) licence conditions are not applicable.	NA	Item not included in Knox EMP.
EMP 86.	Expand the groundwater monitoring bore network with the establishment of at least one 'on-farm' bore per farm.	To allow the collection of baseline and ongoing groundwater data to inform management.	Install after clearing of farm lots but prior to commencement of irrigation.	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 I_056_Goomig Farm Management Units and Bores_01112016	Conformant	Bores installed previously by DAFWA. I_056 displays bore locations distributed across the area applicable to this audit. KAI advised (31-Aug-2016) that bores have been located according to 'farm management units' rather than individual lot boundaries.	NR	Clearing of farm lots not yet commenced.
EMP 87.	Determine sampling parameters for 'on farm' bores in consultation with the IRG including: <ul style="list-style-type: none"> groundwater levels EC pH. 	To inform management.	Prior to commencement of irrigation and annually after the commencement of irrigation.	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 M_053_IRG meeting minutes_09022016 R_070_KAI_Briefing Note to IRG - Proposed variation to Weaber Plain groundwater monitoring regime_00002016	Conformant	KAI advised that sampling parameters have not changed. The February 2016 IRG meeting minutes verify that IRG endorsed the monitoring parameters listed in Table 1 of the Briefing Note to IRG (R_070), noting that "the list may be modified based on the position paper being developed".	NA	Item amended in Knox EMP (refer to KEMP 87).
<i>KEMP 87</i>	<i>Determine sampling parameters for 'on farm' bores including:</i> <ul style="list-style-type: none"> <i>groundwater levels</i> <i>EC</i> <i>pH.</i> 	<i>To inform management.</i>	<i>Prior to commencement of irrigation and annually after the commencement of irrigation.</i>	<i>KAI</i>	NA	NA	NA	NR	Irrigation not yet commenced.
EMP 88.	Undertake monitoring of the bores established under Item 86 for physical, chemical and nutrient parameters as determined by DoW licence conditions if regional bore ground water quality exceeds triggers.	To increase the monitoring spatial intensity to help determine location and reasons for exceedance. To assist with development of appropriate contingency action.	Annually at commencement of dry season once trigger has been exceeded.	LANDCORP / KAI	KAI advice (31-Aug-2016)	NR	No DoW licence and therefore no conditions. <u>2015 recommendation retained:</u> The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.	NR	Construction not yet commenced. <u>2015 recommendation retained:</u> The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.
EMP 89.	Maintain a database of groundwater levels and groundwater quality data based on monitoring results.	To provide data to inform management. To be used in combination with high and low intensity bores where exceedances of triggers are defined.	Ongoing – database to be updated at least every six months with the database to be established prior to June 2013.	KAI	KAI advice (31-Aug-2016) D_052_2016 groundwater monitoring results_00002016 D_080_KAI_Goomig Knox Groundwater Database_11012017	Conformant	A database is being maintained which includes groundwater monitoring data (quality and levels).	Conformant	Monitoring data from Knox Creek Plain bores included in latest database (D_036).
EMP 90.	Establish and maintain a database of groundwater chemical and nutrient parameters.	To provide data to inform management.	Ongoing – database to be updated annually.	KAI	KAI advice (31-Aug-2016) D_052_2016 groundwater monitoring results_00002016 D_080_KAI_Goomig Knox Groundwater Database_11012017	Conformant	Refer to EMP 89. A database is being maintained by KAI that includes groundwater quality data. In 2015, the auditors' gave four recommendations regarding revision of the database, which appear to have been mostly addressed, as follows: <ul style="list-style-type: none"> trigger values for some parameters included high and low intensity bores distinguished 	Conformant	The database for Weaber Plain also contains data for Knox Creek Plain bores. A separate spreadsheet provided (D_036) outlines the bores that belong to each area.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							<ul style="list-style-type: none"> Weaber Plain and Knox Creek Plain bores distinguished frequency of monitoring denoted (refer to EMP 84). 		
EMP 91.	Update groundwater model and operation of groundwater management system with monitoring data derived from EMP 84, 89 and 90, in consultation with the IRG.	To assist in determining an optimal dewatering strategy and to forecast potential breaches of trigger values within a ten year period.	Prior to commencement of irrigation and subsequently every 2–4 years depending on monitoring trends. If worst case scenario indicated a breach in trigger levels, modelling must be updated every two years.	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Conformant	The 'Weaber-Knox' groundwater model was reviewed and updated in 2014. Updates are required every 2–4 years and such is required to be undertaken by 2018 at the latest. The groundwater model was not updated during this audit period.	NA	Item amended in Knox EMP (refer to KEMP 91).
KEMP 91	Update groundwater model and operation of groundwater management system with monitoring data.	To assist in determining an optimal dewatering strategy and to forecast potential breaches of trigger values within a ten year period.	Prior to commencement of irrigation and subsequently every 2–4 years depending on monitoring trends. If worst case scenario indicated a breach in trigger levels, modelling must be updated every two years.	KAI	NA	NA	NA	NR	Irrigation not yet commenced.
EMP 92.	Define the conditions at which various irrigation methods can be utilised for the leased farms on the Weaber Plain development based on the outcomes of future modelling undertaken.	To maximise water use efficiency and minimise potential environmental impacts of shallow groundwater levels by managing irrigated agriculture and/or cropping systems where required, e.g. on leased farms.	Review every five years in association with modelling from the commencement of irrigation.	KAI	N/A	NR	Irrigation commenced in 2015. Review of irrigation conditions not required until 2019.	NA	Item amended in Knox EMP (refer to KEMP 92).
KEMP 92	Define the conditions at which various irrigation methods can be utilised for the Knox Creek Plain farms, based on the outcomes of modelling undertaken.	Refer to EMP 92.	Refer to EMP 92.	KAI	NA	NA	NA	NR	Irrigation not yet commenced.
EMP 93.	Adopt ANZECC guidelines trigger values for a 'high conservation/ecological value system' for three years then adopt appropriate site-specific trigger levels for chemicals and nutrients in accordance with ANZECC & ARMCANZ guidelines (2000).	To ensure monitoring and management responses relate to appropriate trigger levels.	For the initial three years, after which site-specific triggers will be adopted.	KAI	KAI advice (31-Aug-2016; 24-Jan-2017) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 R_078_DAF_Groundwater chemistry of the Weaber Plain (Goomig Farmlands): baseline results 2010-13_00092015 R_082_KAI_Goomig-Knox Surface Water Management Report 2016_00012017 D_080_KAI_Goomig Knox Groundwater Database_11012017 D_083_KAI_Surface Water Tailwater combined results 2016_13012017	Conformant	<p>KAI advised that this is an incorrect application of the ANZECC & ARMCANZ (2000) guidelines, which were developed to establish target levels for various purposes applicable to surface water rather than groundwater.</p> <p>The initial three year timeframe, based on the July 2011 date of the original EMP was completed in July 2014. Groundwater trigger values are described in the groundwater monitoring database provided (D_080).</p> <p>Consistent with the 2015 CAR finding, this action was based on the requirements of condition 12G of EPBC 2010/5491, which was subject to a variation in August 2015. Condition 12G no longer requires site specific trigger levels to be in accordance with ANZECC guidelines. Varied condition 12G now states that site specific trigger values “may be determined in consultation with the IRG and within the context of Condition 11”.</p> <p>Site specific trigger values have since been adopted, derived from a study undertaken by DAFWA (R_078) and - as advised by KAI - in consultation with the IRG and in the context of condition 11 and condition 12G of EPBC 2010/5491. KAI advised that in the context of condition 11, and as discussed in the DAFWA report (R_078), site-specific triggers have been interpreted to now relate to water quality triggers for the Keep River as groundwater is no longer considered by KAI and the IRG to be a</p>	NA	Item amended in Knox EMP (refer to KEMP 93).

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							receiving environment. As the EMP Groundwater Management Sub-plan states that the methodology and design characteristics will be continuously refined on future monitoring and modelling results in consultation with the IRG, the auditors infer that the rationale for the new triggers aligns with the general groundwater monitoring requirements of this EMP. Subsequently the auditors have concluded that on balance the intent of the action has been met; however, this should be confirmed with the OEPA and considered in the context of the following recommendation intended to remove the ongoing ambiguity associated with this action. 2015 recommendation is retained: The auditors recommend review of this action (and the groundwater monitoring requirements of the EMP generally) to be consistent with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG, to the satisfaction of the OEPA (also refer to EMP 84). <u>Note:</u> A variation to the groundwater monitoring requirements of the EPBC Act approval was approved.		
KEMP 93	Adopt water quality trigger values established under the requirements of EPBC Approval 2010/5491.	To ensure monitoring and management responses relate to appropriate trigger levels.	Ongoing	KAI	KAI advice (31-Aug-2016; 24-Jan-2017) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	Conformant	Refer to EMP 93 (Weaber Plain). This is being managed under the guidance of the IRG, which references the EPBC Act approval. KAI advised the Knox Aquatic Fauna Management Plan, required under the EPBC Act, was approved by the Department of Environment and Energy on 23 December 2016. Triggers applied are those developed and adopted under the Weaber Plain approval

Groundwater contingency actions

Item	Trigger	Corrective action	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 94.	Groundwater levels, soil salinity and quality exceed or are likely to exceed trigger levels	1. Investigate cause. 2. Implement actions consistent with Groundwater Management Plan (Appendix 3) (e.g. modify land use/irrigation strategies, groundwater extraction). 3. Document changes in Annual Environmental Report (AER).	Refer Groundwater Management Plan (Appendix 3)	KAI	Refer to EMP 19, EMP 84. EMP 88 and EMP 93 KAI advice (31-August-2016) D_007_CSBP_2016 Soil testing results_19082016 D_052_2016 groundwater monitoring results_00002016 R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 D_080_KAI_Goomig Knox Groundwater Database_11012017	PNC	Soil salinity monitoring has been undertaken in the audit period, and KAI advised that no exceedances were recorded (refer to EMP 19). Groundwater quality data provided now includes trigger levels (D_080) for some (but not all) of the analytes listed under EMP 84. Trigger levels had not been provided for previous years' assessments [R_001]). The updated database indicates exceedances of trigger levels for some analytes (e.g. EC, Na, Cl) in some bores in 2016. Exceedances were also noted for these analytes as well in earlier monitoring events, which were not able to be assessed in previous years, as discussed above. No information was provided in relation to how the indicated exceedances were addressed. Given there appears to have been some exceedances detected but no information provided regarding corrective action in accordance with the EMP, the auditors conclude this item is a	NR	Irrigation not yet commenced.

Item	Trigger	Corrective action	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							potential non-conformance. However, the auditors acknowledge that the groundwater and surface water monitoring and management regime has been revised based on DAFWA studies and IRG endorsement. The auditors anticipate the revised regime addresses the intention of this EMP; however, this should be confirmed with the OEPA and the EMP revised accordingly if appropriate to avoid ongoing ambiguities and potential inconsistencies. <u>2016 recommendation</u> : The auditors recommended this action is revised to satisfaction of OEPA.		
EMP 95.	Levels of chemicals and nutrients exceed scenarios that show: <ul style="list-style-type: none">an increasing trend in the concentration of any chemical (at statistical confidence levels)an exceedance of the site-specific triggers for a particular chemical over two consecutive years.	<ol style="list-style-type: none">Implement EMP 8 and 9 (Table 14) [KEMP: item 6 (Table 14)] to better map the distribution of groundwater exceeding target levels.Investigate cause.In consultation with the IRG, identify remedial action required, which could include the modification of irrigation and agricultural practices, reducing or ceasing the use of fertiliser and/or chemicals, groundwater abstraction or a combination of these measures.Implement remedial action immediately after trigger levels are exceeded or, in consultation with the IRG, at an appropriate time.Monitor success of remedy quarterly for 12 months or, following consultation with the IRG and in accordance with the advice from the IRG, <i>(the following text from KEMP only)</i> in relation to the impacts of MNES in the Keep River.Document changes in Annual Environmental Report (AER).	Refer Groundwater Management Plan Appendix 3	KAI	Refer to EMP 93 and EMP 94 KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	PNC	Refer to EMP 93 and EMP 94 – the information provided is inadequate to readily determine if this action has been conformed with; as such, the auditors conclude this item is potentially non-conformant. However, as discussed above, the auditors acknowledge revisions to the monitoring and management regime based on DAFWA studies and IRG advice and anticipate these address the intention of this EMP; however, this should be confirmed with the OEPA and the EMP revised accordingly to avoid ongoing ambiguities and potential inconsistencies. <u>2016 recommendation</u> : The auditors recommended this action is revised to satisfaction of OEPA.	NR	Irrigation not yet commenced.

Discharge management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Farm tailwater management									
EMP 96.	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system in consultation with DAFWA and the Office of the Environmental Protection Agency.	Capacity to manage runoff to avoid transporting chemicals downstream.	Prior to commencement of irrigation	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 I_066_GoomigFarmManagementUnits_01112 016 R_055_KAI report to IRG October 2016_05102016 P_059 P_060 P_061	Conformant	Tailwater retention areas observed. As noted in 2015, each retention area may service more than one individual lot as there is no longer an intention for individual lot owners. For example, the tailwater retention area in Lot 3 receives tailwater from lots 3 and 5. Lot 3 and 5 combined is considered one "farm management unit" (I_066). Auditors were advised that DAFWA personnel (i.e. Richard George and Don Bennett, as advisors to the IRG on behalf of the proponent) have been briefed on the tailwater management arrangements via the IRG, including a presentation with aerial photographs at the June 2015 IRG meeting. In addition, the OEPA has approved the Weaber (December 2013) and Knox (November 2015) Environmental Management Programs which both include the farm tailwater management requirements. As such, auditors assessed this item as conformant in 2015. This situation is unchanged in 2016, thus auditors have applied the same finding. Currently there are two tailwater retention areas in operation that coincide with the two farm management units currently being irrigated (Lots 3/5 and Lots 14/17/18) (R_055; I_066). <u>2015 recommendation retained:</u> The auditors recommend revision of the wording of this action if the EMP is to be updated as the need for tailwater retention areas in each lot is no longer valid and retention areas are being constructed to receive water from more than one farm lot.	NA	Item amended in Knox EMP (refer to KEMP 96).
KEMP 96	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system.	Capacity to manage runoff to avoid transporting chemicals downstream.	Prior to commencement of irrigation	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 97.	No usage of chemicals and fertilisers when the tailwater retention capacity is unavailable.	To prevent the transporting of nutrients and chemicals downstream.	Ongoing from commencement of farming	KAI	Site inspection (31-Aug-2016) KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Conformant	As noted in 2015, tailwater retention capacity has not been reached nor is it ever expected to in the dry season as the capacity of retention areas includes a 25 mm threshold for rainfall runoff. Dry season flows that exceed the equivalent of 25 mm of runoff have never been recorded at the Border Creek gauging station (WRM 2015). Wet season flows above this threshold cannot be stored and are discharged to the environment. Discharge in the wet season is not expected to be an issue with respect to chemical and fertiliser runoff due to the natural dilution from rainfall. This remains the case in 2016 thus auditors have applied the same finding.	NR	Construction not yet commenced.
Education and erosion protection measures (as per Surface Water Management Sub-plan and Soil Management Sub-plan)									
EMP 98.	Provide an Information Package to prospective landowners/lessees, which: <ul style="list-style-type: none">• outlines the susceptibility of soil to erosion from high intensity rainfall during the wet season• encourages maintenance of crop cover during the wet season to reduce soil erosion• outlines optimal irrigation strategies to reduce potential impacts of sodicity and salinity• includes information regarding identification of salinity and sodicity and mechanisms to	To minimise the potential for agricultural practices to result in erosion by ensuring prospective landowners are aware of the risks and appropriate management measures.	At sublease of farm lots	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
	report this to the Proponent.								
Water quality and hydrodynamics									
EMP 99.	Determine AUSRIVAS trigger score levels for aquatic macro-invertebrates in consultation with the IRG. Updated wording of C'wealth EPBC Approval (2010/5491) condition 11f: “ <i>Use of best practice multivariate analyses on species level macro-invertebrates and fish assemblage data, within an adequate experimental design (as defined in the AFMP required under condition 10), using multiple indices of 'ecological condition' and a 'weight of evidence' approach, to assess any change in ecological health of Keep River pools (K1, 2, and 3) relative to baseline and upstream reference sites'.</i> ”	To manage the discharge of stormwater and surplus groundwater to protect the downstream environment and EPBC listed species.	Prior to commencement of irrigation	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period. <u>2015 recommendation retained:</u> The auditors recommend updating the wording of EMP 99, to the satisfaction of the OEPA, to reflect the intent of the varied condition 11f in the EPBC Act approval (EPBC 2010/5491) (variation dated 28 March 2014). AusRivAS trigger values are no longer required under EPBC 2010/5491 and as such should be removed from the Discharge Management Sub-plan.	NA	Item amended in Knox EMP (refer to KEMP 99).
<i>KEMP 99</i>	<i>Adopt water quality trigger levels, as developed in consultation with the IRG under EPBC Approval 2010/5491 and EPBC 2014/7143.</i>	<i>To manage the discharge of stormwater and surplus groundwater to protect the downstream environment and EPBC listed species.</i>	<i>Prior to commencement of irrigation</i>	<i>KAI</i>	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	NR	Irrigation not expected to commence until 2018 at the earliest.
EMP 100.	Establish and update annually, a list of key analytes (chemicals and nutrients) to be sampled, based on-farm practices as part of ongoing water quality monitoring in consultation with DAFWA, DoW and the IRG.	To ensure key chemicals and nutrients are included in water quality monitoring.	Prior to commencement of planting of crops, then ongoing annually	KAI	KAI advice (31-Aug-2016) M_053_IRG meeting minutes_09022016 R_062_KAI_Goomig surface water monitoring results_02022016	Conformant	IRG meeting minutes from 9 February (M_053) state the following: “The IRG having reviewed the Triggers used in water quality assessment for selected analytes (Appendix A at TAB 5) endorses these as triggers and analytes for the 2016 irrigation season.” Meeting minutes also state that the IRG acknowledge the findings of R_062 (dated 2 February 2016) under the cross-reference “TAB 5 Goomig surface water monitoring results” as follows: “That the IRG notes the findings of the Goomig surface water monitoring program in the dry season of 2015 and the early wet season 2016.” Appendix A to R_062 details the following analytes for surface water monitoring: pH, EC, turbidity, DO, total N, total P and Atrazine. DAFWA is represented on the IRG. The auditors understand DoW is not represented, and has reportedly never been involved in contributing to the development or revision of such a list. <u>2016 recommendation:</u> The auditors recommend revise the wording of this item to exclude DoW from consultation, subject to the advice and satisfaction of the OEPA.	NA	Item amended in Knox EMP (refer to KEMP 100).
<i>KEMP 100</i>	<i>Establish and update annually, a list of key analytes (chemicals and nutrients) to be sampled, based on-farm practices as part of ongoing water quality monitoring</i>	<i>To ensure key chemicals and nutrients are included in water quality monitoring.</i>	<i>Prior to commencement of planting of crops, then ongoing annually</i>	<i>KAI</i>	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	NA	NA	NR	Planting of crops not expected to occur until 2018 at the earliest.
EMP 101.	Install a water quality and flow gauging station capable of sampling, on a flow proportional basis (at least sub-daily when required) at the stormwater outlet from the Development Area.	To determine flow rate from the Project Area to inform management.	Prior to commencement of planting of crops	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	DW1 Gauging Station installed on Border Creek sighted during site inspection. Automatic sampling and monitoring program (SCADA) also sighted. The SCADA program has the ability to undertake automatic and manual samples.	NA	Item amended in Knox EMP (refer to KEMP 101).
<i>KEMP 101</i>	<i>Install a water quality and flow gauging station at the stormwater outlet from the Development Area.</i>	<i>To determine flow rate from the Project Area to inform management.</i>	<i>Prior to commencement of planting of crops</i>	<i>KAI</i>	NA	NA	NA	NR	Planting of crops not expected to occur until 2018 at the earliest.
EMP 102.	Monitor water quality at the stormwater outlet from the Development Area, in consultation with DAFWA, DoW and DPW AND/OR DER.	To determine salinity and nutrient contribution from the Project Area to inform	On a flow proportional basis (with the ability to	KAI	R_055_KAI report to IRG October 2016_05102016	Conformant	Telemetered flow monitoring and sampling is usually undertaken through the SCADA program at the stormwater outlet (DW1	NA	Item amended in Knox EMP (refer to KEMP 102).

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
		management.	sample sub-daily as required)		KAI advice (31-Aug-2016) D_083_KAI_Surface Water Tailwater combined results 2016_13012017		Gauging Station [DW1GS]). However, a KAI report to IRG (R_055) states that the telecommunications infrastructure which reports DW1GS events has not been operational since mid-2016. As maintenance of this infrastructure is the responsibility of a third party, KAI has been physically monitoring DW1GS and remotely monitoring flows through downstream Border Creek Gauging Station to enable cross-checking of flow discharge through the DW1GS. The report notes that there were no dry season flows through the DW1GS. <u>2015 recommendation retained:</u> The auditors recommend consideration be given to clarifying the timing of this action to state “When flowing in the dry season” (as wet season analysis not expected to be relevant due to dilution factor and lack of on-farm activity). The auditors also recommend consideration be given to revision of the parties listed for consultation to the IRG, subject to the advice and satisfaction of the OEPA.		
KEMP 102	Monitor water quality at the stormwater outlet from the Development Area	To determine salinity and nutrient contribution from the Project Area to inform management.	On a flow proportional basis (with the ability to sample sub-daily as required)	KAI	NA	NA	NA	NR	Construction not yet commenced. <u>Note:</u> timing recommendation in EMP 102 (Weaber Plain).
EMP 103.	Ensure the flow gauging stations at Border Creek and the Keep River have the required accuracy to measure low flow rates in consultation with the Northern Territory NRETAS and IRG.	To provide flow data to manage the discharge of stormwater and surplus groundwater.	Prior to commencement of planting of crops	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016 KAI advice (31-Aug-2016)	Completed	This item was considered Conformant in 2015; however, based on the timing requirement no further consideration is required and the finding has been amended to Completed.	NA	Item not included in Knox EMP.
EMP 104.	Monitor water flow at the stormwater outlet from the Development Area, Border Creek and the Keep River, determined in consultation with IRG, DAFWA, DoW and DPW AND/OR DER.	To preserve and protect the water quality of the Keep river and EPBC listed species, prevent erosion of the banks of the Keep River and provide maximum mixing potential.	Ongoing from commencement of irrigation	KAI	R_055_KAI report to IRG October 2016_05102016 KAI advice (31-Aug-2016) D_083_KAI_Surface Water Tailwater combined results 2016_13012017	Conformant	Refer to EMP 102. Telemetered flow monitoring is being undertaken through the SCADA program at the stormwater outlet (DW1 Gauging Station), Border Creek Gauging Station, Keep river Gauging Station and the D8 outflow and pump; however, physical monitoring has been undertaken by KAI since June 2016 due to a fault with telecommunications. <u>2015 recommendation retained:</u> The auditors recommend consideration be given to clarifying the timing of this action to state “When flowing in the dry season”. The auditors also recommend consideration be given to revision of the parties listed for consultation to the IRG, subject to the advice and satisfaction of the OEPA.	NA	Item amended in Knox EMP (refer to KEMP 104).
KEMP 104	Monitor water flow at the stormwater outlet from the Development Area and the Keep River.	To preserve and protect the water quality of the Keep river and EPBC listed species, prevent erosion of the banks of the Keep River and provide maximum mixing potential.	Ongoing from commencement of irrigation	KAI	NA	NA	NA	NR	Irrigation not yet commenced.
Discharge infrastructure and program									
EMP 105.	Develop and implement an adaptive groundwater and stormwater discharge program that addresses: <ul style="list-style-type: none">design and location of dewatering infrastructuredesign and location of discharge infrastructuredischarge rates, rules and contingency actionsmonitoring locations and requirements including infrastructure and setupwritten evidence of any Northern Territory	To provide information for adaptive management of the discharge of stormwater and surplus groundwater.	Ongoing after sale/lease of farmland and prior to the commencement of stormwater and groundwater discharge from operational farms	KAI	KAI advice (31-Aug-2016)	NR	KAI advised groundwater (and stormwater during the dry season) is not being discharged from the Project area. <u>2015 recommendation retained:</u> The auditors recommend revision of this action in consultation with the IRG and to the satisfaction of the OEPA with respect to “stormwater discharge” as, based on the advice received, stormwater will not be deliberately discharged from the project area in the dry season as part of standard management (i.e. accidental discharge would only occur in the event of a breach of the	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
	Government permits that are required for discharge of groundwater <ul style="list-style-type: none">management measures that ensure discharge of water will not impact on water quality in Border Creek/Keep River; this includes erosion protection measures.						tailwater retention system). In the wet season stormwater will overflow from all areas (inside and outside the project area) and any stormwater released above tailwater storage capacity will be subject to significant dilution.		
EMP 106.	Refine the discharge dilution model/relationship based on river flow monitoring data and water quality history from the Ord Stage 1 D4 drain and available water quality data from the Keep River system.	To determine when flow rates at Border Creek and the Keep River fall below a minimum flow rate to enable flushing.	Prior to commencement of irrigation	KAI	R_055_KAI report to IRG October 2016_05102016 KAI advice (31-Aug-2016)	Completed	<p>This item was considered Conformant in 2015; however, based on the timing requirement no further consideration is required and the finding has been amended to Completed.</p> <p>Additionally, while the requirement of this action is incorporated into the Operational Surface Water Model (OSWM), KAI advised that the OSWM is not practicable for use and has been replaced by a system of simple dilution factors. KAI advised that an alternative management approach has been determined which will result in the same outcome as the intent of the action, that is, to ensure adequate dilution of any discharges that may adversely affect the water quality of the Keep River.</p> <p>The auditors were advised that in normal wet season conditions, should stormwater flow occur at the DW1 stormwater discharge point, other flow in the Keep River catchment will be occurring. 2015-2016 wet season monitoring indicated the Goomig development contributed less than 1.5% of total flow in the Keep River (KAI 2016). The broader, high volume, catchment flow into the Keep River will result in the required pool flushing. This has been raised with the IRG (R_055 dated 5 October 2016) for comment as follows:</p> <p>"The OSWM is not being utilised in its current form. This is partially due to its non-user friendly data entry arrangements, and partially due to telecommunications/access issues... KAI is using actual data to calculate risk in stormwater discharge based on DW1, Border Creek and Keep River recorded volumes and analyte content in surface water samples, taken at Goomig and Keep River sites. This analysis is informed directly by the data in the Goomig SCADA (when the telecommunications are operating)... The IRG advises that due diligence may need to be done on such a model (i.e. high level assessment of whether it is achieving the required outcomes) in 2–3 years... KAI supports a review and due diligence assessment of its alternative dilution calculation approach at a time suitable for the IRG. It is recommended that at least three years' data be obtained under this approach (dry season 2015 and wet season 2015-2016; dry season 2016 and wet season 2016-2017; and dry season 2017 and wet season 2017-2018)."</p>	NA	Item amended in Knox EMP (refer to KEMP 106).
KEMP 106	Refine the discharge dilution model/relationship based on river flow monitoring data	To determine when flow rates at the Keep River fall below a minimum flow rate to enable flushing.	Prior to commencement of irrigation	KAI	NA	NA	NA	NR	Irrigation not expected to commence until 2018 at the earliest.
EMP 107.	Refine the discharge dilution model/relationship based on flow monitoring data from the Development Area and the Keep River system and water quality characteristics of stormwater from the Development Area.	To determine when flow rates at the Keep River fall below a minimum flow rate to enable flushing.	On a seasonal basis, commencing 12 months after commencement of irrigation	KAI	R_055_KAI report to IRG October 2016_05102016 KAI advice (31-Aug-2016)	Conformant	<p>Refer to EMP 106.</p> <p>The requirement of this action was incorporated into the OSWM which has proved impractical and has been replaced by a simpler system of dilution factors. A KAI report (R_055) states that dilution calculations had been provided to the IRG in</p>	NR	Irrigation not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							<p>February 2016. IRG's position on the simplified approach is as follows:</p> <p>"IRG noted that the OSWM was originally designed to be a management tool for the daily operations. If it is not practical for this purpose then the IRG will need some assurances around the system/model that will be utilised for that function. The IRG advises that due diligence may need to be done on such a model (i.e. high level assessment of whether it is achieving the required outcomes) in 2–3 years." KAI's response is stated as follows:</p> <p>"KAI supports a review and due diligence assessment of its alternative dilution calculation approach at a time suitable for the IRG."</p> <p><u>2016 recommendations:</u></p> <p>The auditors recommend revision of this action, subject to the advice and satisfaction of the OEPA, to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p> <p>The auditors also recommend the timing of this item be revised to reflect the fact that monitoring data is only available during the wet season as there are insufficient flows during the dry season; however, irrigation and the majority of farming is carried out during the dry (i.e. reviews would be carried out annually).</p>		
EMP 108.	Refine flow trigger values for the Keep River and Border Creek gauging station based on the refined discharge dilution model and Operational Surface Water Model.	To determine when flow rates at Border Creek and the Keep River fall below a minimum flow rate to enable flushing.	Ongoing after sale/lease of farm lots or commencement of farming activity	KAI	R_055_KAI report to IRG October 2016_05102016 KAI advice (31-Aug-2016; 24-Jan-2017)	PNC	<p>Refer to EMP 106 & 107.</p> <p>As identified in 2015, the auditors were advised that flow-trigger values have still not been established; hence this item has been assessed as potentially non-conformant.</p> <p>KAI further advised: 'The combined pool volume of the K1, K2 and K3 pools is 1.26GL (Surrich 2014). In the event that a dry season flow occurred through the DW1 Gauging Station, it is likely that (a) much of the flow would soak into the dry ground, and not make it to the Keep River; and (b) if the flow was substantial enough to make it to the Keep River, flushing 1.26GL+ of freshwater from the M2 channel would flush the pools and provide for sufficient dilution. Flushing with M2 water in the event of a dry season tailwater flow is the mandated mitigation action under the EPBC approval. As such, flow trigger values are not really needed. In the event of a dry season flow, M2 channel flushing would occur to mitigate risk if the flow was sufficient to make it to the Keep River'.</p> <p><u>2015 recommendation retained:</u> The auditors recommend revision of this action, subject to the advice and satisfaction of the OEPA, to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p>	NA	Item amended in Knox EMP (refer to KEMP 108).
KEMP 108	Review/refine trigger values for the Keep River pools.	To update discharge model.	Annually	KAI		NA	NA	NR	Irrigation not yet commenced.

Discharge monitoring regime and corrective actions

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 109.	Telemetered flow monitoring at development gauge, existing gauging stations along Border Creek and the Keep River and in groundwater discharge pipe.	Continuous (hourly) flow monitoring when stormwater or groundwater discharge occurs.	No discharge of surplus groundwater to the Keep River unless there is sufficient threshold natural flow. No significant impact on the health of aquatic ecosystems from stormwater and surplus groundwater.	<ol style="list-style-type: none"> Investigate cause. This could include examining management practices and identifying instances where water may have been unnecessarily discharged during low flow periods. Conduct an intensive water quality sampling program upstream and downstream of the discharge point. Immediately initiate processes to identify whether remedial action is required, in consultation with the IRG. Remedial actions could include: <ul style="list-style-type: none"> releasing irrigation water from the M2 channel into Border Creek increasing groundwater pumping into the Ord Stage 1 or 2 supply channel during periods of low river flow installing additional erosion protection educating farm owners/managers revision of management practices (including groundwater discharge rules). Implement remedial action/s. Monitor success of remedial action/s quarterly for a period of 12 months Report on any findings as a result of monitoring. 	KAI	Refer to EMP 102	Conformant	Refer to EMP 102. Telemetered flow monitoring has not been able to be undertaken at DW1GS since June 2016, due to a technical fault with telecommunications; however, physical monitoring of DW1GS has been undertaken and no discharge of stormwater or groundwater has occurred during the 2016 dry season. As such, flow monitoring has not been required and this item has been assessed as conformant.	NA	Item amended in Knox EMP (refer to KEMP 109).
KEMP 109	Telemetered flow monitoring at the development gauge, and the existing gauging station on the Keep River and in groundwater discharge pipe.	Refer to EMP 109	Refer to EMP 109.	Refer to EMP 109.	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 110.	Aquatic ecology monitoring (including aquatic invertebrates and fish) in the Keep River pools (K1, K2, K3 and K4) and threatened aquatic ecology monitoring (this includes the Speartooth shark [Glyphis glyphis], Northern river shark [Glyphis garriki], Dwarf Sawfish Pristis clavata and Pristis Microdon) at three sites in the Keep River estuary (EST1, EST2, EST3). Monitoring to be supported by concurrent sampling at five control / reference locations to differentiate natural changes from those potentially resulting from the action (as listed in the Aquatic Fauna Management Plan).	Annually in the late dry season from the commencement of the action. Initially for three years to establish a baseline, and then for a further three years post-development. If there is no detectable effect on any of the species included in the aquatic monitoring program, then frequency is reduced to three-yearly, or in response to known events that may result in exceedances of site-specific trigger values for water quality Keep River.	No detrimental change in the AUSRIVAS macroinvertebrate category and in fish assemblage composition that is caused by the action. This can be resulting from stormwater, surplus groundwater and groundwater seepage increases, as compared against reference sites that reflect natural variability in ecosystem health.	<ol style="list-style-type: none"> Immediately investigate cause over a period of at least 12 months through reviewing management practices and determining whether ecological health of aquatic fauna has deteriorated. Identify remedial action required. Remedial actions could include: <ul style="list-style-type: none"> releasing irrigation water from the M2 channel in Border Creek increasing the pumping rates of the eastern bores to reduce groundwater seepage increasing groundwater pumping into the Ord Stage 1 or 2 supply channel during periods of low river flow potentially, pending analysis, discharging groundwater into the lower Keep River estuary installing additional erosion protection educating farm owners/managers revision of management practices (including groundwater discharge rules) review flow monitoring data. Implement remedial action/s, as required, immediately or at a time determined with the IRG to be appropriate. Monitor success of remedial action/s at least quarterly for 12 months. Report on any findings in Annual Environmental Report (AER) as a result of monitoring. 	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	3-year baseline study -Completed. 3-years post-development - NR	Baseline study assessed as completed a previous audit period. The IRG supports the commencement of the "three years' post-development" aquatic fauna monitoring as being the year that 90% of Goornig farms are irrigated.	NA	Item amended in Knox EMP (refer to KEMP 110).
KEMP 110	Utilise the aquatic ecology monitoring conducted under EPBC Approval 2010/5491 as an indicator of the	Ongoing	Refer to EMP 110.	Refer to EMP110.	KAI	NA	NA	NA	NR	Construction not yet commenced in the Knox Plain area. Post-development aquatic ecology monitoring conducted under EPBC

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
	<i>outcomes of the combined Weaber and Knox management.</i>									Approval 2010/5491 not yet commenced.

Biodiversity and habitat management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment

Induction

EMP 111.	Induct personnel on biodiversity and habitat management measures	To minimise potential for adverse environmental impacts by ensuring personnel are informed of appropriate environmental management procedures.	Within one week of personnel commencing work on-site	KAI	R_002_KAI_Ord Irrigation Expansion Project_Environment Induction_00002016 R_003_KAI Induction Register_00002016	Conformant	Formal inductions are undertaken by KAI that include biodiversity and habitat management measures.	NR	Construction not yet commenced.
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Construction

EMP 112.	Ensure development maps clearly delineate the Buffer Area and Development Area.	To prevent unauthorised clearing by ensuring clearing boundaries are appropriately documented.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet scheduled – development on hold.
EMP 113.	Delineate the boundaries of the vegetation to be cleared for construction in the field with flagging tape, signage or fencing.	To prevent unauthorised clearing by ensuring clearing boundaries are appropriately marked in the field.	Prior to ground disturbance	KAI	Refer EMP 6	Completed	Refer to EMP 6. Item assessed as Completed as construction in the Weaber Plain development has been completed.	NR	Construction not yet scheduled – development on hold.
EMP 114.	Restrict movement of construction machinery and equipment to designated tracks and roads.	To minimise disturbance by consolidating vehicle access to designated areas.	Ongoing from commencement of ground disturbance	LANDCORP / KAI	Refer to EMP 7	Completed	Refer to EMP 7. Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
EMP 115.	Stage clearing of vegetation so that areas are cleared only as required.	To minimise the area of exposed surfaces at any one time and to allow native animals the chance to move on.	During construction of shared infrastructure	LANDCORP / KAI	Refer to EMP 7	Completed	Refer to EMP 7. Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 116.	Manage topsoil in accordance with the Soil Management Sub-plan	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Native fauna encounter

EMP 117.	Give native animals encountered on-site the opportunity to move on if there is no threat to personnel safety in doing so.	To prevent injury or death to native animals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No native animal encounters/incidents recorded. KAI advised of occasional road-kill incidents of wallabies only.	NR	Construction not yet commenced.
EMP 118.	Call the nominated carer or Wildlife Hotline to rescue sick or injured native animals if they are encountered.	To prevent loss of native animals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	Refer EMP 117. No calls required.	NR	Construction not yet commenced.

Biodiversity and habitat monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 119.	Compliance of marked clearing boundary with development maps.	Daily	No clearing adjacent to areas where clearing boundaries are not defined.	Report as Environmental Incident and initiate Incident Procedure which shall include: <ul style="list-style-type: none"> investigating the cause of the incident redefining boundaries. 	KAI	R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016 R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016 R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016 R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016 R_050_KAI_KAI Ground disturbance	PNC	The ground disturbance log (R_050) indicates that clearing was undertaken during the audit period. Environmental audits (R_039 – R_043) indicate that marked clearing boundaries are checked regularly (four times in the month of August); however, they are not checked daily as required by the action (i.e. a potential non conformance). KAI advised that it was not practical to undertake these inspections daily. In addition, approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049) as clearing boundaries for this clearing were not marked prior to clearing (i.e. also a potential non	NR	Construction not yet commenced.

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
						log_00002016 R_049_KAI_Environmental incident report_18042016 D_010_KAI_April-May 2016 Buffer Condition_00052016 C_071_OEPA_Ministerial Statement 938 Notification of Clearing Event_00072016 C_072_DER_Subject: Clearing of Native Vegetation in a Designated Buffer in the Goomig Farmland_24062016		conformance).. The corrective actions outlined in EMP 120 were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken. <u>2015 recommendation retained:</u> The auditors recommend revision of the frequency of this action in the EMP, to the satisfaction of the OEPA.		
EMP 120.	Extent of clearing and ground disturbance along pre-defined boundaries.	Daily	No clearing or disturbance outside of pre-defined boundaries (Figure 1).	Report as Environmental Incident and initiate Incident Procedure which shall include: <ul style="list-style-type: none"> investigating the cause of the incident redefining boundaries if due to inadequate boundary marking rehabilitating affected area as required in accordance with the Rehabilitation Management Sub-plan. monitoring the success of remedial action. 	KAI	Refer to EMP 119 D_010_KAI_April-May 2016 Buffer Condition_00052016 C_071_OEPA_Ministerial Statement 938 Notification of Clearing Event_00072016 C_072_DER_Subject: Clearing of Native Vegetation in a Designated Buffer in the Goomig Farmland_24062016	PNC	Environmental audits (R_039 – R_043) do not explicitly state that the extent of clearing is monitored. Monitoring was also not undertaken daily during this audit period (i.e. a potential non conformance). Approximately 3.35 ha of vegetation within the Buffer Area was accidentally cleared in April 2016 and reported as an incident (R_049). The corrective actions outlined in this item were and continue to be undertaken including monitoring (D_010). The incident was also reported to OEPA and DER (C_071, C_072). Both agencies advised no further action will be undertaken. <u>2015 Recommendation retained:</u> The auditors recommend revision of the environmental inspection spreadsheet to explicitly state this monitoring requirement and revision of the frequency of this action, to the satisfaction of the OEPA.	NR	Construction not yet commenced.

Buffer management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Access									
EMP 121.	Control vehicle access to the buffer through designated tracks, and provision of signage to inform of restrictions to areas, including speed restrictions, hygiene protocols, and to advise that no off-track driving is permitted.	To minimise impacts to the buffer by consolidating and restricting access	At all times	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016) P_037 P_038	Conformant	Signage to control access to the Buffer Area observed during site inspection. KAI advised that access tracks through the Buffer Area are not signposted with vehicle speeds, hygiene protocols etc. to minimise the risk of unauthorised access (i.e. signage would only draw attention to these access tracks and increase likelihood of unauthorised access).	NA	Item amended in Knox EMP (refer to KEMP 121).
KEMP 121	Control vehicle access to the buffer through designated tracks, and provision of signage to inform of restrictions to areas	To minimise impacts to the buffer by consolidating and restricting access	At all times	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 122.	Control human access to the buffer through provision of signage at entry points to Buffer Area advising of restrictions and no unauthorised access.	To minimise impacts to the buffer by restricting access	At all times	KAI	Site inspection (31-Aug and 1-Sep-2016) KAI advice (31-Aug-2016) P_037 P_038	Conformant	Signage advising of restricted access observed during site inspection.	NA	Item not included in Knox EMP.
Infrastructure									
EMP 123.	Induct all personnel constructing or utilising infrastructure within the Buffer Area, including roads, channels, groundwater bores and the phone tower, to advise on protocols for hygiene, wildlife encounters, prohibited activities etc.	To minimise potential for adverse environmental impacts by ensuring personnel are informed of environmental management procedures	Within one week of commencing work on-site	KAI	KAI advice (31-Aug-2016) R_002_KAI_Ord Irrigation Expansion Project_Environment Induction_00002016 R_003_KAI Induction Register_00002016	Conformant	All personnel inducted on protocols for accessing the Buffer Area including hygiene (weeds), wildlife encounters and prohibited activities.	NA	Item amended in Knox EMP (refer to KEMP 123).
KEMP 123	Induct all personnel constructing or utilising infrastructure within the Buffer Area, including roads and groundwater bores.	To minimise potential for adverse environmental impacts by ensuring personnel are informed of environmental	Within one week of commencing work on-site	KAI	NA	NA	NA	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
		<i>management procedures</i>							
Vegetation improvement									
EMP 124.	Assess and map vegetation condition within the buffer according to the Keighery (1994) Vegetation Condition rating scale.	To provide data to inform management.	Prior to ground disturbance	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in previous compliance report.	Completed	Ord Land and Water conducted a vegetation condition assessment of the Knox Creek Plain Buffer Area in the previous audit period.
EMP 125.	Stabilise and revegetate areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW AND/OR DER.	To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.	Within 12 months of completion of construction of infrastructure	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	PNC	This item remains potentially non-conformant from the previous audit period finding. No revegetation of areas of vegetation below a rating of Very Good has been undertaken. <u>2015 recommendation retained:</u> The auditors recommend revision of revegetation requirements in consultation with the OEPA and deletion of this action if revegetation is agreed as not being necessary due to natural regeneration and other management actions being undertaken.	NA	Item amended in Knox EMP (refer to KEMP 125).
KEMP 125	<i>Stabilise and spread topsoil (if available) in areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW.</i>	<i>To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.</i>	<i>Within 12 months of completion of construction of infrastructure</i>	<i>KAI</i>	NA	NA	NA	NR	Construction not yet commenced. <u>2015 recommendation retained:</u> The auditors recommend revision of this action to remove reference to species lists and planting procedures as the action does not include a revegetation requirement.
EMP 126.	In consultation with the DPW AND/OR DER and DoW, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings. Species used in such revegetation will be agreed with the DPW AND/OR DER and DoW.	To improve the ability of the buffer to reduce the potential impacts of elevated groundwater levels and minimise diffuse groundwater discharge (including salts) to downstream watercourses.	Within 12 months of completion of construction of infrastructure and as determined to be required in consultation with DPW AND/OR DER and DoW	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	PNC	This item remains potentially non-conformant from the previous audit period finding. <u>2015 recommendation retained:</u> The auditors recommend revision or deletion of this action in consultation with OEPA and the indicated agencies.	NA	Item amended in Knox EMP (refer to KEMP 126).
KEMP 126	<i>If required for degraded areas, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings.</i>	<i>To improve the ability of the buffer to reduce the potential impacts of elevated groundwater levels and minimise diffuse groundwater discharge (including salts) to downstream watercourses.</i>	<i>Within 12 months of completion of construction of infrastructure and as determined to be required in consultation with DPW.</i>	<i>KAI</i>	NA	NA	NA	NR	Construction not yet commenced.
EMP 127.	Undertake weed control in areas identified as containing vegetation below a rating of 'Very Good', focusing on the most degraded areas first and in accordance with procedures detailed in the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.	Within 12 months of completion of construction of infrastructure and ongoing	KAI	KAI advice (24-Jan-2017) R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016 R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016 R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016 R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016 R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016 D_010_KAI_April-May 2016 Buffer Condition_00052016	PNC	Refer to EMP 56. KAI advised that weed control is currently undertaken on an "as needs" basis; whereby weeds are identified and immediately controlled during ongoing environmental site inspections (R_040–R_043). However, these environmental audits and the monitoring undertaken in April–May 2016 (D_010) do not verify that weed control is being undertaken in areas containing vegetation below a rating of 'Very Good'. KAI further advised that '(w)eed control (namely, <i>Parkinsonia</i>) occurs regularly along the 'old D8 drain' rehabilitation area, north of Minjiljirra Lane. While the rating system may not have been adopted or updated, the weed control is occurring, thus the outcome is as intended'. The auditors acknowledge the above advice and expect that that the intention of the action is being met as suggested. As such, this item has been assessed as	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							technically potentially non-conformant. <u>2016 recommendation:</u> Auditors recommend revision of this action to accurately reflect the weed control and monitoring program currently being undertaken, to the satisfaction of the OEPA		

Cane toads

EMP 128.	Liaise with DPW with regard to their plans for implementation of the State Cane Toad Strategy (DEC 2009) in the Development Area.	To reduce the potential effect of cane toads on the Buffer Area.	As required	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
EMP 129.	Provide information to land owners and Traditional Owners, on the Cane Toad Strategy for Western Australia (DEC 2009).	To reduce the potential effect of cane toads on the Buffer Area	At sublease of farm lots	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.

Ongoing buffer maintenance and monitoring

EMP 130.	Investigate the possibility of extending the DPW AND/OR DER Traditional Owner Ranger Program (Kununurra based) into the Buffer Area, or incorporating other Indigenous management initiatives – consult with MG Corporation regarding shared responsibilities for maintenance of the Buffer Area.	To maximise opportunities for involvement of Traditional Owners in ongoing management of the Buffer Area	Ongoing	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	Completed	Item assessed as completed as the investigation completed for Weaber Plain is assumed by the auditors to also be relevant to the Knox Creek Plain.
EMP 131.	Maintain the Buffer Area perimeter fencing, where required, to minimise stock invasion, remove introduced livestock, and continue to remove any subsequent invading livestock, as required, to protect native vegetation condition	To ensure species and habitats within the Buffer Area are not adversely affected by stock grazing	Ongoing	KAI	Site inspection (31-Aug and 1-Sep-2016) KAI advice (31-Aug-2016) P_044 P_045 P_046 P_047	Conformant	Buffer Area perimeter fencing observed during site inspection. The installation of improved fencing across a creek bed observed during site inspection verifies KAI is maintaining perimeter fencing to minimise stock invasion. A small number of cattle were observed in the Buffer Area during the site inspection; however, removal of stock is an ongoing process. KAI advised that a muster was undertaken in early August 2016 and removed 71 cattle from the Buffer Area.	NR	Construction not yet commenced.

Fire management

EMP 132.	Implement the Fire Management Sub-plan	To reduce the potential for impacts of fire on the buffer, infrastructure, MNES populations and habitats	Ongoing	KAI	Refer to EMP 45	Conformant	No key actions have been identified from the Fire Management sub-plan (FMP); therefore, the plan has not been audited. Auditors were advised in 2015 that the FMP is due for revision in 2016; however, this it yet to be done. KAI advised that fire management is primarily acting in accordance with the SWEK permit – Refer to EMP 45.	NR	Construction not yet commenced.
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Buffer monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 133.	Assess vegetation condition using the Keighery (1994) rating scale and update vegetation condition map.	Annually commencing within 12 months of the commenceme nt of the action.	All areas within buffer to be in 'Very Good' or better condition.	Investigate cause, e.g. cattle intrusion, loss of seed through heavy rains. Take appropriate remedial actions, e.g. feral animal eradication programs, stabilise and revegetate area. Monitor success of remedy (annually at time of regular monitoring).	KAI	KAI advice (31-Aug-2016; 24-Jan-2017) D_010_KAI_April-May 2016 Buffer Condition_00052016	PNC	A vegetation condition assessment using the Keighery rating scale was undertaken in April-May 2016; however updated vegetation condition mapping was not provided to the auditors. As such, this item has been assessed as potentially non-conformant. KAI advised that monitoring sites have been rationalised and the sites monitored in previous assessments have not been monitored in 2016. KAI further advised: 'Only those sites adjacent to existing tracks etc are now monitored – e.g. around bores, where human/vehicle access occurs for monitoring. Vegetation condition in all buffers has improved since the removal of	NR	Construction not yet commenced.

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
								cattle from the development area. Photographic evidence of buffer condition from around the development is maintained. There has been no evidence of declining buffer condition since the removal of cattle'. KAI also advised: 'KAI considers mapping unnecessary if the condition is not declining (evidenced through photographic records taken on six-monthly basis)'. <u>2016 recommendation</u> : The auditors recommend that the proponent ensures a vegetation condition assessment and mapping is undertaken annually as required or undertake revision of this item to remove requirement for mapping, to the satisfaction of the OEPA.		

Rehabilitation management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Baseline information									
EMP 134.	Select reference sites in buffer and conservation areas containing landforms and vegetation comparable (or likely to have been comparable) to those of planned disturbance areas not required post-construction.	To locate suitable sites against which to compare rehabilitation success.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in previous compliance report. <u>Note</u> : Area 11 will require rehabilitation and reference sites to compare revegetation to; however, as the area is still being used as a quarry, reference sites have not yet been selected for this area.	NR	Construction not yet commenced.
EMP 135.	Survey reference sites identified in EMP 134 to determine indicator species, density of native species, % cover of native species, native species richness and % weed cover as outlined in the monitoring procedures.	To provide data against which rehabilitation success can be measured.	Prior to ground disturbance and quarterly throughout the rehabilitation process	KAI	KAI advice (31-Aug-2016) D_010_KAI_April-May 2016 Buffer Condition_00052016 I_057_Goomig Farm Management Units and Buffer Condition Monitoring Locations_01112016	PNC	KAI advised that monitoring of rehabilitation areas is now undertaken consistent with revised buffer monitoring, whereby condition is assessed and weed presence and any inconsistency with adjacent land is noted. The results of monitoring provided (D_010) indicates that: <ul style="list-style-type: none">all four rehabilitation areas are not being monitoredreference sites within those rehabilitation areas are no longer being monitoredparameters outlined in this action are not being measuredareas are not being assessed quarterly. As such, this item has been assessed as potentially non-conformant. <u>2015 recommendation retained</u> : The auditors recommend that the requirements and timing of this action be amended, in consultation with the OEPA, to six monthly as per the monitoring regime (EMP 162–164) due to local conditions (e.g. wet season); also due to the potential impact on the buffer from frequent access.	NR	Construction not yet commenced.
EMP 136.	Determine parameters and targets for each indicator species as appropriate. e.g. density of indicator species, % cover of indicator species, etc.	To enable specific aspects of rehabilitation success to be measured.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 137.	Undertake a weed survey of the project area to establish baseline information in accordance with the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	To provide data to inform management.	As specified in the Weed, Plant Pathogen and Pest Animal Management Sub-plan	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	Completed	Item assessed as completed in the previous audit period.
Seed collection									
EMP 138.	Develop a species list for seed collection based on species known to germinate from	To maximise potential for rehabilitation success by	As required for rehabilitation	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel)	Completed	Item assessed as completed in a previous audit period.	NR	Seed collection not yet required.

[illegible]

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 147.	Disturbed areas will be stabilised through a combination of contouring and slope stabilisation as required.	To minimise erosion of rehabilitated landforms.	Progressively as disturbed areas are no longer required	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 148.	All rehabilitation areas will be reshaped and contoured to blend with adjacent relief and drainage as far as practicable. This will include: <ul style="list-style-type: none"> the removal of impediments to run-off diversion of surface run-off around borrow pits to prevent flooding and potential instability of pit walls where necessary filling of borrow pits with subsoil to level of natural ground surface. 	To minimise erosion of rehabilitated landforms.	During the rehabilitation process	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 149.	All tracks to be rehabilitated will be ripped or scarified to minimise compaction.	To maximise potential for rehabilitation success by allowing roots and water to penetrate the soil profile.	During the rehabilitation process	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Construction not yet commenced.
Topsoil management									
EMP 150.	Remove topsoil from cleared areas and manage in accordance with the Biodiversity and Habitat Management Sub-plan.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Clearing not yet commenced.
EMP 151.	Ensure material to be used for rehabilitation (e.g. topsoil, cleared vegetation, etc.) does not contain declared weeds.	To maximise potential for rehabilitation success by preventing the introduction and/or spread of declared weeds into rehabilitation areas.	Prior to rehabilitation	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 152.	Relocate stripped topsoil and (if applicable) cleared vegetation directly to areas required to be rehabilitated, where possible.	To maximise the benefits of using topsoil and mulch by minimising storage time.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 153.	Spread stripped topsoil evenly across areas to be rehabilitated (to a nominal depth of approximately 100–150 mm). Work parallel with the contours as far as practicable, to minimise the creation of preferential drainage pathways.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During rehabilitation process	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 154.	Rake rehabilitation areas to minimise potential impacts from compaction.	To maximise potential for rehabilitation success by allowing roots and water to penetrate the soil profile.	After spreading of topsoil and prior to placement of cleared vegetation	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 155.	Where direct replacement of rehabilitation material (e.g. topsoil, cleared vegetation, etc.) is not possible, stockpile material for later use in rehabilitation activities.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Clearing not yet commenced.
EMP 156.	Locate stockpiles of rehabilitation material (e.g. topsoil, cleared vegetation, etc.) within already disturbed areas wherever possible.	To minimise disturbance.	Ongoing from commencement of ground disturbance	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 157.	Restrict topsoil stockpile height to less than 2 m.	To conserve native seed banks for direct propagule return, reduce the risk of self-composting and provide opportunities for the roots of temporary vegetation growing on the topsoil stockpile to reach the deepest parts of the stockpile, thereby sustaining many micro-organisms.	Ongoing from commencement of ground disturbance	KAI	Site inspection (1-Sep-2016) KAI advice (31-Aug-2016)	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 158.	Where topsoil is not available, import topsoil in consultation with the Department of Parks and Wildlife (DPW) Kununurra office.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	Prior to rehabilitation	KAI	NA	NR	No importation of topsoil has occurred to date. <u>2015 recommendation retained</u> : The auditors recommend deletion of this action in future revisions of the EMP if topsoil is never intended to be imported.	NA	Item not included in Knox EMP.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
Fencing									
EMP 159.	Provide temporary fencing and signage around rehabilitation areas.	To minimise disturbance to rehabilitation areas by restricting access.	During rehabilitation process	KAI	Site inspection (31-Aug-2016) P_011	Conformant	Signage and earthen bunds (fences) to prevent access observed.	NR	Rehabilitation not yet commenced.
Inspection									
EMP 160.	Inspect borrow pits no longer required following construction to ensure all pits are backfilled and rehabilitated such that they are free draining.	To ensure timely and appropriate rehabilitation of borrow pits.	As required	KAI	Site inspection (1-Sep-2016)	NR	Inspections not required as Area 11 is still in use.	NR	Construction not yet commenced.
EMP 161.	Where there is insufficient subsoil for backfilling: <ul style="list-style-type: none">import material for backfilling in consultation with DPW if applicableensure pits are rehabilitated to minimise standing shallow water as much as possible.	To minimise the creation of mosquito breeding habitat.	As required	KAI	NA	NR	Not required to date.	NA	Item not included in Knox EMP.

Rehabilitation monitoring regime

Item	Activity and location	Frequency/timing	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 162.	Native species richness, density and % cover within rehabilitation sites as outlined in the monitoring procedures.	Twice annually (in May and October).	Mean native species richness, plant density and % cover in the rehabilitation site after five years (including at least two wet seasons where >75% of the long-term average rainfall has fallen) is greater than: <ul style="list-style-type: none"> 70% of the mean % cover of natives in the reference sites 70% of the mean native species richness in the reference sites. 	<ol style="list-style-type: none"> Identify cause. Implement approach to remedy cause, which could include: <ul style="list-style-type: none"> application of fertilisers or wetting agents etc. if applicable implement supplementary direct seeding or seedling planting program in accordance with procedures review rehabilitation process and amend if appropriate. Monitor success of approach. 	KAI	Refer to EMP 135	PNC	Refer to EMP 135. 2015 recommendation retained: The auditors recommend the revision of this action to remove the requirement to measure plant density as there is no specific target for plant density outlined in this action.	NR	No rehabilitation sites associated with Knox Creek Plain.
EMP 163.	Indicator species in rehabilitation sites.	Twice annually (in May and October).	As determined in accordance with Item EMP 136	<ol style="list-style-type: none"> Identify cause. Implement approach to remedy cause, which could include: <ul style="list-style-type: none"> application of fertilisers or wetting agents etc. if applicable implement supplementary direct seeding or seedling planting program in accordance with procedures review rehabilitation process and amend if appropriate. Monitor success of approach. 	KAI	Refer to EMP 135	PNC	Refer to EMP 135.	NR	No rehabilitation sites associated with Knox Creek Plain.
EMP 164.	Exotic species richness and % cover within rehabilitation sites as outlined in the monitoring procedures.	Twice annually (in May and October).	Exotic flora species: <ul style="list-style-type: none"> no greater than 10% increase in weed species density/cover/distribution compared to reference sites no Declared Plants present on-site six months following completion of construction. no infested areas as defined in the Weed, Plant Pathogen and Pest Animal Management Sub-plan no local priority areas as defined in the Weed, Plant Pathogen and Pest Animal Management Sub-plan no new weed species present. 	<ol style="list-style-type: none"> Identify cause. Identify the weeds, their location and coverage. Implement remedy which could include: implementing a weed control program reinforcing management actions in the Weed, Plant Pathogen and Pest Animal Management Sub-plan and Rehabilitation Management Sub-plan. Monitor success of control. 	KAI	Refer to EMP 135	PNC	Refer to EMP 135.	NR	No rehabilitation sites associated with Knox Creek Plain.

Item	Activity and location	Frequency/ timing	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 165.	Erosion within and adjacent to rehabilitation sites.	Opportunistic following heavy rainfall events.	Ensure landform is safe and stable with no erosion occurring 18 months after rehabilitation. Reconstructed landform can withstand exceedance of average rainfall occurrences for a period of 10 years.	1. Identify cause of erosion. 2. Consult expert to determine appropriate remedy which may include <ul style="list-style-type: none"> Installing culverts Installing stormwater diversion structures. 3. Implement remedy. 4. Monitor success of remedy.	KAI	KAI advice (31-Aug-2015) Site inspection (1-Sept-2016)	Conformant	KAI advised there have been no heavy rainfall events this audit period. No evidence of erosion sighted during site inspection.	NR	No rehabilitation sites associated with Knox Creek Plain.

Aboriginal heritage management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment

Cultural heritage

EMP 166.	Implement an induction program for personnel and contractors/consultants, and an information package for farm owners/managers, both of which containing information on: <ul style="list-style-type: none"> significance of Aboriginal heritage and the potential impacts of the project procedures to report potential new sites obligations under the <i>Aboriginal Heritage Act 1972</i> (WA) requirements for the protection of known Aboriginal sites. 	To ensure protection of known sites of Aboriginal heritage significance in accordance with the requirements of the <i>Aboriginal Heritage Act 1972</i> (WA), to improve knowledge of Aboriginal cultural heritage in non-indigenous people associated with the project.	Within one week of personnel commencing work on-site	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 R_002_KAI_Ord Irrigation Expansion Project_Environment Induction_00002016 R_003_KAI Induction Register_00002016	Farm sales package – Completed Induction program - Conformant	Farm sales package assessed as completed in a previous audit period. KAI induction package includes relevant information for all requirements of this item.	NR	Construction not yet commenced.
EMP 167.	Document the location of protected areas on development design plans and make available to planners, agents, contractors, and relevant personnel.	To ensure protection of known sites of Aboriginal heritage significance in accordance with the requirements of the <i>Aboriginal Heritage Act 1972</i> (WA), to improve knowledge of Aboriginal cultural heritage in non-indigenous people associated with the project.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016 KAI advice (31-Aug-2015)	Completed	Item assessed as completed in a previous audit period.	Conformant	Item assessed as conformant during the last audit period (i.e. location of protected areas are documented). As construction has not yet commenced, this information is not yet required to be provided to relevant contractors and personnel.
EMP 168.	Flag the boundaries of project areas to ensure activities do not intrude into areas where Aboriginal sites are present.		Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 169.	Place 'No Go' signage along boundaries immediately adjacent to Buffer Areas around protected Aboriginal sites.		Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 170.	If a suspected heritage site is detected follow procedures as outlined in the Heritage Site Detection Procedure. Potential heritage sites include stone/shell scatters (middens), stone tools, rock paintings and engravings, grinding patches, scar trees, ochre sites/quarries, and skeletal remains.	To ensure protection of previously unrecorded Aboriginal heritage sites detected during construction/clearing activities in accordance with the <i>Aboriginal Heritage Act 1972</i> (WA).	Ongoing from commencement of ground disturbance	KAI	KAI advice (31-Aug-2015) Site inspection (1-Sept-2016)	Conformant	No new sites reported.	NR	Construction not yet commenced.
EMP 171.	Site heritage monitors from MG Corporation issued with a permit under Section 16 of the <i>Aboriginal Heritage Act 1972</i> (WA) will be on-site to monitor clearing and earthworks activities.		Ongoing from commencement of ground disturbance	KAI	KAI advice (31-Aug-2016) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	PNC	Only minor clearing within Lot 13 was undertaken during this audit period. KAI advised that site heritage monitors from MG Corporation were not present during this clearing. KAI previously advised during the last audit period that this requirement is unfeasible due to the high costs involved. KAI also advised: <ul style="list-style-type: none"> it complies with the <i>Aboriginal Heritage Act 1972</i> (AH Act) is in regular contact and maintains a strong relationship with MG Corporation management and Directors MG Corporation is satisfied with the 	NA	Item not included in Knox EMP.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
							current arrangement. To the auditors' knowledge a s 16 (of the AH Act) permit is only required if someone was intending to enter and excavate a known Aboriginal site; therefore, it appears unnecessary to require this permit for general clearing (the known sites have been excluded from clearing areas and retained in Buffer Areas). <u>2015 recommendation retained:</u> The auditors recommend revision of this action on the advice of the MG Corporation and in consultation with the Department of Aboriginal Affairs based on the reported unfeasibility of having a monitor present during all clearing events.		
EMP 172.	A qualified archaeologist issued with a permit under Section 16 of the Aboriginal Heritage Act 1972 (WA) will be available to come to site if a suspected heritage site is uncovered.		As required	KAI	KAI advice (31-Aug-2016)	NR	No suspected heritage sites have been identified during this audit period.	NA	Item not included in Knox EMP.
EMP 173.	The MG Corporation will be briefed on proposed works and work schedules and informed of detailed aspects of the project.	Ensure regular ongoing involvement of the Miriung and Gajerrong people in heritage management throughout the life of the project, in accordance with the OFA and OES.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 174.	The MG Corporation will be involved in inspections of the Project Area throughout construction (with supporting briefing).		Quarterly and as required	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 175.	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.		Annually and as required	KAI	KAI advice (31-Aug-2016)	PNC	KAI advised that no agreements to meet will be enacted until KAI and MG Corporation have land tenure. As such, this item remains potentially non-conformant	PNC	KAI advised that no agreements to meet will be enacted until KAI and MG Corporation have land tenure. As such, this item remains potentially non-conformant
EMP 176.	Establish cultural heritage database with GIS records of site locations in the project area.	Establish and maintain up-to-date records on Aboriginal heritage sites within the project area.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_05042016	Completed	Item assessed as completed in a previous audit period.	Conformant	Figure of Aboriginal heritage sites within Knox Creek Plain provided by KAI during last audit period verifies site locations are recorded and retained by KAI. No further work has been undertaken this audit period.

Aboriginal heritage monitoring regime and corrective actions

Item	Activity and location	Frequency	Target	Corrective action	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 177.	Signage or temporary fencing/ tape showing heritage site locations.	Daily during clearing and construction.	No disturbance to sites not approved to be disturbed under Section 18 of the Aboriginal Heritage Act 1972 (WA).	<ol style="list-style-type: none"> Report as Environmental Incident and initiate Incident Procedure, including: <ul style="list-style-type: none"> stopping work in the vicinity of the boundary investigating the cause of the disturbance redefining boundaries if due to inadequate boundary marking rehabilitating vegetation in the area as required in accordance with the Rehabilitation Management Sub-plan restore the 'site' (e.g. scatters or middens could have been buried, rock art altered, skeletal remains exposed) – develop a remedial plan in consultation with appointed archaeologist and MG Corporation monitoring the success of remedial action. Consult with the Department of Aboriginal Affairs and MG Corporation to determine actions required to restore the site to its original condition. 	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 178.	Aboriginal monitors to check ground-	For each new area to be disturbed.	To identify new sites before clearing occurs.	Refer to Heritage Site Detection Procedure.	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report -	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.

Item	Activity and location	Frequency	Target	Corrective action	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
	disturbance work areas.				Statement 938_04052016				

Appendix 4

Evidence register

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Code	Reference	Author/ Organisation	Version	MS938	EMP	Hard-copy only	Topic /notes	File name (as provided)
R_001	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_04052016	Strategen	0				Compliance Assessment for audit period 2015	LAN15036_01 R001 Rev 0
R_002	R_002_KAI_Ord Irrigation Expansion Project_Environment Induction_00002016	KAI			EMP 2 EMP 111 EMP 123 EMP 166		Induction package	
R_003	R_003_KAI Induction Register_00002016	KAI			EMP 2 EMP 111 EMP 123 EMP 166		Induction register	
W_004	W_004_http://www.dsd.wa.gov.au/docs/default-source/default-document-library/ord-river-irrigation-area-stage-2_march-2015?sfvrsn=6_23092016	DSO		4.4			Public availability of 2015 CAR	
C_005	C_005_OEPA_Ministerial Statement 938 - 2015 Ord River Expansion Project Compliance Assessment Report_25052016	Sutton A / OEPA					Receipt of 2015 CAR by OEPA	R00773931.Records
C_006	C_006_DSD_2015 Ord Irrigation Expansion Project Compliance Assessment Report_04052016	Wood S / DSD					Submission of 2015 CAR prior to June 2016	Statement 938 - Compliance Assessment Report 2015 from DSD 4 May 2016 (2016-1462781464317) (2)
D_007	D_007_CSBP_2016 Soil testing results_19082016	CSBP			EMP 19 EMP 20		July soil testing results	EMP 19 EMP 20 CSBP Soil test report
R_008	R_008_KAI_Spraying Logs_07072016	KAI			EMP 30		June and July spraying logs	KAI spraying logs
R_009	R_009_Lone Eagle Spraying Logs_31072016	Lone Eagle			EMP 30	135	July aerial spraying logs	Lone Eagle aerial Spraying Logs
D_010	D_010_KAI_April-May 2015 Buffer Condition_00052016	KAI					Buffer condition and rehabilitation monitoring	EMP 133 Goomig-Knox Buffer Condition Monitoring April-May 2016
P_011	P_011_Strategen_31082016	Strategen					Bund and signage at rehab area	
R_012	R_012_TAFE_Langford Chemical Use Certification_18052016	TAFE			EMP 32 EMP 36 EMP 38		Chemical certification Brian Langford	Chemcert_IMG_4530
R_013	R_013_AusChemWA_Dwyer Chemical Use Accreditation_00000000	AusChem Training WA			EMP 32		Chemical accreditation Colt Dwyer	EMP 32 John Colt Dwyer Chem Handling Accreditation
R_014	R_008_DAFWA_Pilot Chemical Rating Certificate_29052015	DAFWA			EMP 32 EMP 36 EMP 39		Aerial spraying certification Lance Conley	EMP 36 Lone Eagle DAFWA Operating Certificate
R_015	R_009_Strategen_Ord Irrigation Area-Weaver Development Project Procedure C5 Mechanical Equipment Washdown_02072013	Strategen					Equipment washdown	EMP 38 Ord Irrigation Project Mechanical Equipment Washdown Procedure Rev 1.pdf
R_016	R_016_Strategen_Ord Irrigation Area-Weaver Plain Development Project Procedure C6 Spill Response_02072013	Strategen			EMP 40		Spill response	EMP 40 Ord Irrigation Project Spill Response Procedure Rev 1.pdf
R_017	R_017_Strategen_Ord Irrigation Area-Weaver Plain Development Project Procedure M1 Environmental Emergency Response_02072013	Strategen			EMP 40		Emergency response	EMP 40 Ord Irrigation Project Environmental Emergency Response Procedure Rev 1.pdf
P_018	P_018_Strategen_31082016	Strategen			EMP 18			DSCN1391
P_019	P_019_Strategen_31082016	Strategen			EMP 24			DSCN1397
P_020	P_020_Strategen_31082016	Strategen			EMP 24			DSCN1402
P_021	P_021_Strategen_01092016	Strategen			EMP 24 EMP 26 EMP 24			DSCN1493
P_022	P_022_Strategen_01092016	Strategen			EMP 24			DSCN1494
P_023	P_023_Strategen_01092016	Strategen			EMP 24 EMP 25			DSCN1495
P_024	P_024_Strategen_01092016	Strategen			EMP 24			DSCN1496
P_025	P_025_Strategen_01092016	Strategen			EMP 24			DSCN1497
P_026	P_026_Strategen_01092016	Strategen			EMP 24 EMP 25			DSCN1510
P_027	P_027_Strategen_01092016	Strategen			EMP 24 EMP 25 EMP 25			DSCN1511
P_028	P_028_Strategen_01092016	Strategen			EMP 25			DSCN1396
P_033	P_033_Strategen_01092016	Strategen			EMP 26			DSCN1492
P_034	P_034_Strategen_01092016	Strategen			EMP 26			DSCN1507
P_035	P_035_Strategen_01092016	Strategen			EMP 26			DSCN1508
P_036	P_036_Strategen_01092016	Strategen			EMP 26			DSCN1509
P_037	P_037_Strategen_01092016	Strategen			EMP 121 EMP 122		Signage restricting access to buffer	DSCN1512
P_038	P_038_Strategen_31082016	Strategen			EMP 122		Signage restricting access to buffer	DSCN1430
R_039	R_039_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - April_00042016	KAI			EMP 127		Weed control	Environmental audits April 2016
R_040	R_040_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - May_00052016	KAI			EMP 127		Weed control	Environmental audits May 2016
R_041	R_041_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - June_00062016	KAI			EMP 127		Weed control	Environmental audits June 2016
R_042	R_042_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - July_00072016	KAI			EMP 127		Weed control	Environmental audits July 2016
R_043	R_043_KAI_Environmental audits Goomig (Non Construction) - 2016 Month - August_00082016	KAI			EMP 127		Weed control	Environmental audits August 2016
P_044	P_044_Strategen_31082016	Strategen			EMP 131		maintaining perimeter buffer fencing	DSCN1441
P_045	P_045_Strategen_31082016	Strategen			EMP 131		maintaining perimeter buffer fencing	DSCN1442
P_046	P_046_Strategen_31082016	Strategen			EMP 131		maintaining perimeter buffer fencing	DSCN1445
P_047	P_047_Strategen_31082016	Strategen			EMP 131		maintaining perimeter buffer fencing	DSCN1447
R_048	R_048_SWEK_Permitt to set fire to the bush_26052016	SWEK			EMP 45		burning of vegetation - dust and particulate management	EMP 45 Burning permits issued by SWEK.pdf
R_049	R_049_KAI_Environmental incident report_18042016	KAI			EMP 62		restricted vehicle access to cleared areas through delineation	EMP 119 2016-04-18 incident report - Buffer.pdf
R_050	R_050_KAI_KAI Ground disturbance log_00002016	KAI			EMP 119		Dates of clearing	Ground Disturbance log 2016
P_051	P_051_Strategen_31082016	Strategen			EMP 96		Tailwater storage	DSCN1400
D_052	D_052_2016 groundwater monitoring results_00002016	KAI			EMP 84		2016 groundwater monitoring results	EMP 84 Goomig Knox dry season bore monitoring 2016 results
M_053	M_053_IRG meeting minutes_09022016	DRD			EMP 87		IRG meeting minutes - groundwater monitoring	EMP 87 IRG Meeting Record - 9 February 2016
I_054	I_054_Goomig Farm Management Units and Soil Sampling Locations_01112016	MB Consulting NT			*EMP 19 *EMP 20		soil sampling locations	EMP 19 20 ORD_GoomigFarmMUandSoilSample Sites_1Nov16.pdf
R_055	R_055_KAI report to IRG October 2016_05102016	KAI					surface water monitoring	2016-10-05 KAI Report to IRG - Dry Season 2016.pdf
I_056	I_056_Goomig Farm Management Units and Bores_01112016	MB Consulting NT			*EMP 86		groundwater monitoring locations	EMP 86 ORD_GoomigFarmMUandBores_1Nov16.pdf
I_057	I_057_Goomig Farm Management Units and Buffer Condition Monitoring Locations_01112016	MB Consulting NT			*EMP 135 *EMP 36		soil sampling locations	EMP 135 ORD_GoomigFarmMUandMonLocations_1Nov16.pdf
R_058	R_058_DAFWA_Pilot Chemical Rating Certificate_28062016	DAFWA			EMP 36		Aerial spraying certification Lance Conley	EMP36 Farm chemical spraying accreditation - Lone Eagle.pdf
P_059	P_059_Strategen_31082016	Strategen			EMP 96		tailwater retention	DSCN1401
P_060	P_060_Strategen_31082016	Strategen			EMP 96		tailwater retention	DSCN1462
P_061	P_061_Strategen_31082016	Strategen			EMP 96		tailwater retention	DSCN1463
R_062	R_062_KAI_Goomig surface water monitoring results_02022016	KAI			EMP 100		surface water monitoring	EMP 107 2016-02-02 2015 Goomig Surface Water Monitoring Results
C_063	C_063_KBC_Re: MS 938 ORIA Stage 2 Audit_03112016	Pearce D / Kimberley Boab Consulting			S1_2.1		Clearing amount this year	NA
C_064	C_064_Water Corporation Acrolein injections_19042016	Pearce T / Water Corporation			EMP 61		Weed control within channels	EMP 61 Acrolein injection confirmation April 2016
C_065	C_065_KBC_Re: MS 938 ORIA Stage 2 Audit_01112016	Pearce D / Kimberley Boab Consulting					Response to queries	NA
I_066	I_066_GoomigFarmManagementUnits_01112016	KAI					Goomig Farm management units	ORD_GoomigFarmManagementUnits_1Nov16
R_067	R_067_AusChemWA_(Clive) Wayne Paul Chemical Use Accreditation_00000000	AusChem Training WA			EMP 32		Chemical certification W Paul	chemcert W Paul
R_068	R_068_Agbiotech_Vivusmax_00000000	Agbiotech			EMP 34		Vivus application rates	R_020 from 2015 Evidence
R_069	R_069_Agbiotech_Optimol_00072012	Agbiotech			EMP 34		Optimol application rates	R_021 from 2015 Evidence
R_070	R_070_KAI_Briefing Note to IRG - Proposed variation to Weaver Plain groundwater monitoring regime_00002016	KAI			EMP 87		GW monitoring parameters	EMP 87 Groundwater paper for Feb 2016 IRG meeting
C_071	C_071_OEPA_Ministerial Statement 938 Notification of Clearing Event_00072016	Taylor K / OEPA			EMP 119, 120		No further action on Buffer clearing	EMP 119 OEPA Letter re buffer incident
C_072	C_072_DER_Subject: Clearing of Native Vegetation in a Designated Buffer in the Goomig Farmland_24062016	Ble A / DER			EMP 119, 120		No further action on Buffer clearing	EMP 119 DER to DSD re response to clearing incident
P_073	P_073_KAI_10012017	KAI			EMP 24		Hydrocarbon management	EMP 24 Oil and grease removed from truck 2
P_074	P_074_KAI_10012017	KAI			EMP 24		Hydrocarbon management	EMP 24 Oil and grease removed from truck
R_075	R_075_United Phosphorous Ltd_Blazer_04022011	United Phosphorous Ltd	Version 2		EMP 34		Herbicide label	EMP 34 - Blazer Label - ACIF22_41650-0409
R_076	R_076_NovaSource_Linuron DF_00000000	NovaSource			EMP 34		Herbicide label	EMP 34 - Linuron-DF-label
R_077	R_077_Dow AgroSciences_Verdict_00000000	Dow AgroSciences			EMP 34		Herbicide label	EMP 34 - Verdict Label
R_078	R_078_DAF_Groundwater chemistry of the Weaver Plain (Goomig Farmlands): baseline results 2010-13_00092015	DAFWA (Lillicrap et al)			EMP 90		Groundwater monitoring - baseline	EMP 90 Groundwater chemistry of the Weaver Plain (Goomig Farmlands) - baseline results 2010-13 - RMTFR 392
R_079	R_079_DAF_Goomig Farmlands development Baseline water quality in the lower Keep River_00112014	DAFWA (D. Bennett and R. George)			EMP 93		Keep River baseline water quality monitoring	EMP 93 RMTFR393 Baseline water quality in the lower Keep River
D_080	D_080_KAI_Goomig Knox Groundwater Database_11012017	KAI			EMP 93		Goomig Knox groundwater monitoring	Goomig Knox Groundwater Database 2017-01-11
C_081	C_081_OIC_RE: KAI water use for 2016 season - for environmental audits_13122016	Ord Irrigation Cooperative (M Dear)			S1_2.10		Irrigation water use	S1_2.10 KAI Water Usage Confirmation 2016
R_082	R_082_KAI_Goomig-Knox Surface Water Management Report 2016_00012017	KAI			EMP 93		Surface Water Management	2017-01-17 Goomig-Knox Surface Water Management Report 2016
D_083	D_083_KAI_Surface Water Tailwater combined results 2016_13012017	KAI			EMP 93		Surface water monitoring	2017-01-13 Surface Water Tailwater combined results 2016
D_084	D_084_KAI_Goomig Atrazine Monitoring High Intensity Gwater Bores 2016_00002016	KAI			EMP 84		Atrazine monitoring	Goomig Atrazine Monitoring High Intensity GWater Bores 2016
D_085	D_085_KAI_2016 Groundwater monitoring data collated_00002016	KAI			EMP 84, EMP 94		Groundwater monitoring	2016 Groundwater monitoring data collated
D_086	D_086_KAI_Goomig Knox Groundwater Database to end 2016_16022017	KAI			EMP 84, EMP 94		Groundwater monitoring	2017-02-16 Goomig Knox Groundwater Database to end 2016
C_087	C_087_KAI_And here's the groundwater database that I thought I'd sent you in Feb_16052017	KAI			EMP 84, EMP 94		Groundwater monitoring	And here's the groundwater database that I thought I'd sent you in Feb

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